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Chemicals Identified In Human Biological Media
A Data Base, Second Annual Report, October 1980
Volume II, Part 2

Oak Ridge National Lab., TN

Prepared for

Environmental Protection Agency
Washington, DC

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16. ABSTRACT

A comprehensive data base of chemicals identified in human biological media (tissues and body fluids) has been established under the direction of the Environmental Protection Agency's Office of Pesticides and Toxic Substances Exposure Evaluation (formally Survey and Analysis) Division. This centralized resource of body-burden information was inspired by the concern of government scientists over continuing reports of toxic chemicals in human tissues and body fluids.

Body burden is a reflection of exposures to food, air, and water contaminants, as well as pharmaceuticals. The systematic acquisition of body-burden data will facilitate a more relevant assessment of human exposure to toxic chemicals and xenobiotics than was previously possible using environmental contamination levels.

Data were obtained primarily from the open literature through manual searches of selected journals. Retrospective searching to 1974 is complete and has yielded over 3000 pertinent documents of which approximately 1000 have been entered into the data base as of this report. These sources identify over 500 chemicals which have been found in human biological media.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Body-burden Human tissues/body fluids Residues		

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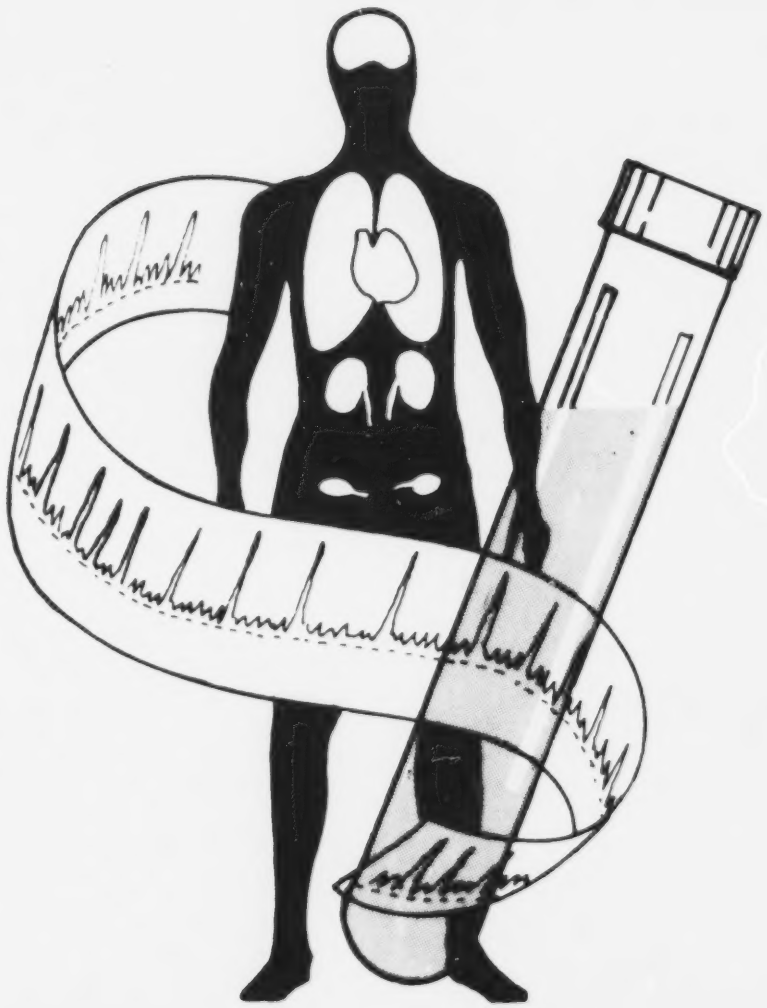

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CHEMICALS IDENTIFIED IN HUMAN BIOLOGICAL MEDIA, A DATA BASE

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Volume II, Part 2
Records 1581-3500

Compiled by

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Fay M. Martin, and John T. Ensminger

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Information Center Complex/Information Division
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Part 2

Data Base 1

(1,3)Dioxolo(4,5-g)cinnoline-3-carboxylic acid, 1-ethyl-1,4-dihydro-4-oxo-
28657-80-9
C12-H10-N2-O5
MW 262.24

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1581 Blood, serum	Injection	Fluorometry	9	a) 2.0-0.03 ug/ml b) 3.6-0.03 ug/ml c) 11.6-0.09 ug/ml d) 30.2-0.1 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 0.25 and 8 hr, 50-mg dose, 4 subjects b) 0.25 and 8 hr, 100-mg dose, 4 subjects c) 0.25 and 8 hr, 250-mg dose, 9 subjects d) 0.25 and 8 hr, 500-mg dose, 5 subjects Values are means after 10-min infusions. All showed monoexponential decay. 500 mg probenecid 6 and 12 hr before infusion of 250 mg/hr cinoxacin increased steady state blood levels 50%. Healthy males, ages 21-55 yr, on a controlled hospital diet. ANTIBIOTICS; DRUGS; DRUG THERAPY; BLOOD SERUM; INDIANA; URINE; COMPARATIVE EVALUATIONS	Israel, K.S. Black, H.R. Nelson, R.L. Brunson, M.K. Nash, J.F. Brier, G.L. Wolney, J.D. 1978
1582 Urine	Injection	Fluorometry	9	a) 19-25 mg b) 59-70 mg c) 88-126 mg d) 222-323 mg	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 50-mg dose, 4 subjects b) 100-mg dose, 4 subjects c) 250-mg dose, 9 subjects d) 500-mg dose, 5 subjects Values are 2- and 24-hr cumulative urines after 10-min infusions. Probenecid pre-treatment decreased amount in 6-hr urines by 25%. Healthy males, ages 21-55 yr, on a controlled hospital diet. ANTIBIOTICS; DRUGS; DRUG THERAPY; BLOOD SERUM; INDIANA; URINE; COMPARATIVE EVALUATIONS	Israel, K.S. Black, H.R. Nelson, R.L. Brunson, M.K. Nash, J.F. Brier, G.L. Wolney, J.D. 1978

Acetamide, N-(5-sulfamoyl-1,3,4-thiadiazol-2-yl)- (8 CI)
Acetamide, N-(5-(aminosulfonyl)-1,3,4-thiadiazol-2-yl)- (9 CI)
59-66-5
C4-H6-N4-O3-S2
MW 222.25, MP 258-259 C (effervesces)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1583 Blood, plasma	Ingestion	HPLC	1	a) 16.0-0.63 ug/ml b) 13-1.7 ug/ml	a) Not applicable b) Not applicable	a) 1 and 24 hr after 2.78 mg/kg in 200-ml solution. Initial value, 15.5 ug/ml at 0.5 hr b) 2.5 and 4 hr after 500-mg sustained-release product (5.56 mg/kg). Initial value, 5 ug/ml at 0.5 hr Healthy 40-yr-old male. DRUGS; MEASUREMENT METHODS; ADULTS; BLOOD PLASMA; CANADA; COMPARATIVE EVALUATIONS	Nossie, M.D. Mousseau, M. Sved, S. Brien, M. 1990

Acetamide, N-methyl
79-16-3
C3-H7-N-O
HW 73.1, HP 20 C, HP 206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1584 Urine		GC	100	Not given	0.3 ml/l	Normal levels MEASUREMENT METHODS: URINE	Barnes, J.R. Henry, R.W. 1974

Acetamide, 2-(p-(2-hydroxy-3-(isopropylamino)propoxy)phenyl)- (8 CI)
Benzeneacetamide, 4-(2-hydroxy-3-((1-methylethyl)amino)propoxy)- (9 CI)
29122-68-7
C14-H22-N2-O3
MW 266.34, MP 146-148 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1585 Blood, plasma	Injection Ingestion	HPLC	12	a) 2.3-0.027 ug/ml b) 0.239-0.053 ug/ml c) 0.862-0.165 ug/ml d) 1.19-0.263 ug/ml	a) Not applicable b) 0.138 ug/ml c) 0.282 ug/ml d) 0.650 ug/ml	a) 0.2 and 24 hr after 50 mg IV. Estimated from graph b) 2.5 and 24 hr after 25-mg, oral c) 3.3 and 24 hr after 50-mg, oral d) 3.3 and 24 hr after 100-mg, oral Healthy males 21-28 yr of age, fasted before and after dose. DRUGS; BLOOD PLASMA; HYPERTENSION; ADULTS; COMPARATIVE EVALUATIONS; URINE	Mason, W.D. Winer, N. Kochak, G. Cohen, I. Bell, R. 1979
1586 Blood, serum	Ingestion	GC	34	a) Not given b) Not given	a) 0.54 + or - 0.03 ug/ml b) 0.55 + or - 0.04 ug/ml	a) Atenolol + placebo b) Atenolol + 50 mg/day chlorthalidone Dose of 300 mg 2x/day for 1 wk. Patients with uncomplicated hypertension. Decreased heart rate and blood pressure. Small decreases in plasma renin activity. DRUGS; DRUG THERAPY; DRUG INTERACTION; BLOOD SERUM; URINE; HYPERTENSION; BLOOD PRESSURE; ADULTS; COMPARATIVE EVALUATIONS; DIURETICS; NETHERLANDS	Teeuw, A.H. Leenen, F.H.H. Geyskes, G.G. Boer, P. 1979
1587 Urine	Injection Ingestion	HPLC	12	a) 39.0-54.0 mg b) 3.1-18.0 mg c) 11.2-36.2 mg d) 30.7-78.6 mg	a) 47 mg b) 12.7 mg c) 28.4 mg d) 51.9 mg	a) After 50 mg IV b) After 25 mg, oral c) After 50 mg, oral d) After 100 mg, oral 48-hr cumulative excretions. Healthy males 21-28 yr of age, fasted before and after dose. DRUGS; BLOOD PLASMA; HYPERTENSION; ADULTS; COMPARATIVE EVALUATIONS; URINE	Mason, W.D. Winer, N. Kochak, G. Cohen, I. Bell, R. 1979
1588 Urine	Ingestion	GC	34	a) Not given b) Not given	a) 258 + or - 13 mg/24 hr b) 237 + or - 14 mg/24 hr	a) Atenolol + placebo b) Atenolol + 50 mg/day chlorthalidone Dose of 300 mg 2x/day for 1 wk. Patients with uncomplicated hypertension. Decreased heart rate and blood pressure. Small decreases in plasma renin activity. DRUGS; DRUG THERAPY; DRUG INTERACTION; BLOOD SERUM; URINE; HYPERTENSION; BLOOD PRESSURE; ADULTS; COMPARATIVE EVALUATIONS; DIURETICS; NETHERLANDS	Teeuw, A.H. Leenen, F.H.H. Geyskes, G.G. Boer, P. 1979

Acetamide, 2,2-dichloro-N-(beta-hydroxy-alpha-(hydroxymethyl)-p-nitrophenethyl)-, D-threo-(-)-, (8 CI)
Acetamide, 2,2-dichloro-N-(2-hydroxy-1-(hydroxymethyl)-2-(4-nitrophenyl)ethyl)-,(R-(R*,R*)) - (9 CI)
56-75-7
C11-H12-C12-N2-O5
MW 323.14, MP 150.5-151.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1589 Blood, serum	Injection		1	a) Not applicable b) Not applicable c) Not applicable	a) 98 ug/ml b) 13.5 ug/ml c) 4 ug/ml	a) Level after 7 doses, 200 mg/kg/day b) 3 hr charcoal hemoperfusion and aqueous hemodialysis c) 14 hr after hemoperfusion and dialysis. 3200-gm 12 day-old with complex urologic problems. Lethargy Hypotension, metabolic acidosis, depression of bone marrow function, gray, dusky, and molted skin, and tachypnea. DRUGS; ANTIBIOTICS; INFANTS; BLOOD SERUM; CASE HISTORIES; MINNESOTA	Hauer, S.M. Chavers, B.M. Kjellstrand, C.M. 1980

Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (8 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1590 Blood	Ingestion		1	58-18 ug/ml	Not given	Range of levels from admission to 26 hr later. 5.5 yr old treated with aspirin every 4-8 hr for 7 days. 2 days before admission 300 mg aspirin and 300 mg acetaminophen were given alternately every 2 hr. 300 mg dose of acetaminophen at admission. Just prior to admission: abdominal pain and vomiting. At admission: comatose, unresponsive to painful stimuli, tachypneic with evidence of shock. Leukocytosis, hypoglycemia, hyperammonemia, hypoprothrombinemia, elevated alkaline phosphatase, metabolic acidosis. Urine was deep orange-red. Marked diffuse, nonfocal cerebral dysfunction. DRUGS; DRUG THERAPY; IOWA; CHILDREN; BLOOD; CASE HISTORIES; HEALTH HAZARDS; NEUROLOGIC MANIFESTATIONS	Bickers, R.G. Roberts, R.J. 1979
1591 Blood, plasma	Ingestion		130	92-404 ug/ml	Not given	Range of means, 4 hr levels in overdose victims. 60 received IV cysteamine, L-methionine, or D-penicillamine. The remainder received supportive therapy only. Patients admitted to hospital in Scotland for paracetamol poisoning. Patients treated with cysteamine within 10 hr had fewest adverse effects. Severe liver damage, hepatic failure, or acute renal failure in patients given supportive therapy only. DRUGS; DRUG THERAPY; BLOOD PLASMA; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Prescott, L.F. Sutherland, G.R. Park, J. Smith, I.J. Proudfoot, A.T. 1976
1592 Blood, serum	Ingestion		1	Not given	5.3 mg/dl	Patient received 5.4 g over approximately 32 hr Sample taken 14 hr after last dose 3.5 yr old Caucasian female, treated for upper respiratory infection. Vomiting, abdominal pain, headache, obtunded state, opisthotonic posturing. Certain symptoms similar to those in Reye syndrome Patient improved before dying of hepatic and renal failure. Liver necrosis, cellular degeneration and necrosis in kidney, and cerebral edema. DRUGS; DRUG THERAPY; BLOOD SERUM; CHILDREN; CASE HISTORIES; TEXAS	Wogen, A.G. Brenner, J.E. 1978

(NEXT PAGE)

Acetanilide, 4'-hydroxy- (8 CI)
Acetamide, N-(4-hydroxyphenyl)- (9 CI)
103-90-2
C8-H9-N-O2
MW 151.16, MP 169-170.5 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1593 Urine	Ingestion	TLC GC/MS	5	7.7-32.0 mg/24 hr	Not given	Levels of metabolite 3-methylthio-4-hydroxyacetanalide after 1800 mg acetaminophen. Healthy volunteers 18-44 yr old DRUGS; METABOLITES; URINE; IN VIVO ANALYSIS; COMPARATIVE EVALUATIONS; NEW JERSEY; NORTH CAROLINA	Klutch, A. Levin, W. Chang, R.L. Vane, F. Conney, A.H. 1978
1594 Urine	Ingestion		6	Not given	18.0%	6x100 mg tablets of phenazopyridine hydrochloride. % of dose in 24-hr urine. 6 healthy males, aged 25-40 yr. DRUGS; METABOLITES; URINE; CANADA	Johnson, W.J. Chartrand, A. 1976
1595 Urine						Review DRUGS; DRUG THERAPY; CHILDREN; REVIEW; ADULTS; COMPARATIVE EVALUATIONS; METABOLISM; METABOLITES; ENZYMES	Peterson, R.G. Rumack, B.H. 1978

Acetic acid, (o-(2,6-dichlorcanilino)phenyl)-, monosodium salt (8 CI)
Benzeneacetic acid, 2-((2,6-dichlorophenyl)amino)-, monosodium salt (9 CI)
15307-79-6
C14-H11-Cl2-N-O2.Na
MW 282.69, MP 283-285 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1596 Bile	Injection	Radiometry	1	Not given	5.3 mg	Collected during 8 hr after 26.5-mg dose. Only part of bile collected, therefore approximate value. 76-yr-old female DRUGS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; URINE; BILE; ANIMAL POPULATIONS; COMPARATIVE EVALUATIONS; SWITZERLAND; METABOLISM; METABOLITES	Stierlin, H. Faigle, J.W. 1979
1597 Urine	Ingestion	Radiometry	2	Not applicable	90 mg	Pooled 72-hr urines. 6 identified metabolites accounted for 70% of excreted 14C. Single 150-mg dose. 2 males, 51 and 52 yr old. DRUGS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; URINE; ANIMAL POPULATIONS; COMPARATIVE EVALUATIONS; SWITZERLAND; METABOLISM; METABOLITES	Stierlin, H. Faigle, J.W. Sallmann, A. Kung, W. Richter, W.J. Kriemler, H.-P. Alt, K.O. Winkler, T. 1979
1598 Urine	Ingestion	Radiometry	2	30.5-35.5 mg	Not given	In urine collected until excretion of 14C virtually complete. 50-mg dose. 70% of 14C accounted for by 3 metabolites. 2 males, 78 and 72 kg. DRUGS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; URINE; BILE; ANIMAL POPULATIONS; COMPARATIVE EVALUATIONS; SWITZERLAND; METABOLISM; METABOLITES	Stierlin, H. Faigle, J.W. 1979

Acetic acid, (2-hydroxyethoxy)-
13382-47-3
C4-H8-O4
MW 120

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1599 Urine	Inhalation	GC/MS	4	512,525-760,955 ug/24 hr	621,516 ug/24 hr	Metabolite of 1,4-Dioxane during and after 6-hr exposure to 50 ppm. Healthy males (mean age 44 yr, mean weight 84 kg). Eye irritation during exposure. DIOXANES; BLOOD PLASMA; URINE; METABOLITES	Young, J.D. Braun, W.H. Rampy, L.W. Chenoweth, M.B. Blau, G.E. 1977

Acetic acid, (2,4-dichlorophenoxy)-
94-75-7
C8-H6-Cl2-O3
MW 221.04, MP 138 C, BP 160 C at 0.4 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1600 Blood, plasma	Ingestion	GC	6	5.6-3.3 ug/ml	Not applicable	Range of means 1-168 hr after 5 mg/kg. Peak 33 ug/ml at 12 hr. Healthy males. INDIA; PESTICIDES; BLOOD PLASMA; URINE; METABOLITES; PESTICIDE RESIDUES	Khanna, R.N. Kohli, J.D. 1975
1601 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 100.0% b) 5.8%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974
1602 Urine			a) 2 b) 2 c) 2	a) 0.19-9.20 ppm b) 0.20-1.0 ppm c) 0.4-1.0 ppm	a) Not given b) Not given c) Not given	a) Exposed farmers b) Spray equipment operators c) Aircraft spray equipment operators Pesticide not detected in 16 other occupationally exposed workers. PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976
1603 Urine	Ingestion	GC	6	a) Not given b) Not given c) Not given d) Not given	a) 26.9 + or - 7.2 % of dose b) 56.6 + or - 6.4% of dose c) 70.6 + or - 8.1% of dose d) 76.5 + or - 8.4% of dose	a) 24 hr b) 48 hr c) 72 hr d) 96 hr Values are cumulative excretions after dose of 5 mg/kg. No metabolites were detected. Healthy males. INDIA; PESTICIDES; BLOOD PLASMA; URINE; METABOLITES; PESTICIDE RESIDUES	Khanna, R.N. Kohli, J.D. 1975

Acetic acid, (2,4,5-trichlorophenoxy)-
93-76-5
C8-H5-Cl3-O3
MW 255.49, MP 153 C (crystals from benzene)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1604 Blood, plasma	Ingestion	GC	a) 6 b) 1 c) 1	a) 5.0-0 ug/ml b) 10.05-0 ug/ml c) 1.8-1.65 ug/ml	a) Not applicable b) Not applicable c) Not applicable	a) Range of means 1-168 hr after 5 mg/kg. Peak 22 ug/ml at 7 hr b) 1-168 hr after 2 mg/kg. Peak 15 ug/ml at 7 hr c) 1-168 hr after 3 mg/kg. Peak 17 ug/ml at 7 hr. Healthy males INDIA; PESTICIDES; BLOOD PLASMA; URINE; METABOLITES; PESTICIDE RESIDUES	Khanna, R.N. Kohli, J.D. 1975
1605 Urine			a) 6 b) 2 c) 2	a) 1.1-3.6 ppm b) 0.5-1.2 ppm c) Not applicable	a) Not given b) Not given c) 0.05 ppm	a) Spray operators b) Spray crew foremen c) Aircraft spray operators No pesticide detected in 12 other occupationally-exposed workers. PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976
1606 Urine	Ingestion	GC	6	a) Not given b) Not given c) Not given d) Not given	a) 27.4 + or - 2.9% of dose b) 50.2 + or - 5.5% of dose c) 59.8 + or - 7.6% of dose d) 63.3 + or - 8.6% of dose	a) 24 hr b) 48 hr c) 72 hr d) 96 hr Values are cumulative excretions after dose of 5 mg/kg. No metabolites detected. Healthy males INDIA; PESTICIDES; BLOOD PLASMA; URINE; METABOLITES; PESTICIDE RESIDUES	Khanna, R.N. Kohli, J.D. 1975

Acetic acid, (3,4-dihydroxyphenyl)- (8 CI)
Benzeneacetic acid, 3,4-dihydroxy- (9 CI)
102-32-9
C8-H8-O4
MW 168.15, MP 131-132 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1607 Urine	Ingestion	GC	4	a) 465-595 mg/24 hr b) 116-500 mg/24 hr	a) 582 mg/24 hr b) 290 mg/24 hr	a) Standard drug formulation b) Delayed absorption tablets Dosage 2.5-3.5 g/day levodopa. 2 male and 2 female parkinsonian patients aged 61-68 yr. Gastrointestinal side effects with delayed release form. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Sandler, M. Ruthven, C.R.J. Goodwin, B.L. Hunter, K.F. Stern, G.M. 1974

Acetic acid, (4-hydroxy-3-methoxyphenyl)- (8 CI)
Benzeneacetic acid, 4-hydroxy-3-methoxy- (9 CI)
306-08-1
C9-H10-04
MW 182

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1608 Urine	Ingestion	GC	4	a) 625-785 ug/24 hr b) 207-510 ug/24 hr	a) 689 ug/24 hr b) 362 ug/24 hr	a) Standard drug formulation b) Delayed absorption tablets Dosage 2.5-3.5 g/day levodopa. 2 male and 2 female parkinsonian patients aged 61-68 yr. Gastrointestinal side effects with delayed release form. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Sandler, M. Ruthven, C.R.J. Goodwin, B.L. Hunter, K.R. Stern, G.M. 1974

Acetic acid, trichloro-
76-03-9
C2-H-Cl3-O2
MW 163.40, MP 57-58 C, BP 196-197 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1609 Blood, plasma	Ingestion	Colorimetry	7	a) 6-36 mg/l b) 8-38 mg/l	a) Not applicable b) Not applicable	a) 15 mg/kg chloral hydrate b) 22 mg/kg triclofos Range of means, 1 and 24 hr. These showed continuous increase. No differences between drugs at any time (P> 0.05). Healthy males. All patients: excessive gastrointestinal gas and flatus during chronic therapy. SEDATIVES; HYPNOTICS; DRUGS; DRUG THERAPY; METABOLISM; METABOLITES; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Sellers, E.M. Lang-Sellers, M. Koch-Weser, J. 1978
1610 Urine	Inhalation	Colorimetry	a) and b) 19 c) 9	a) 10-109 mg/g creatinine b) 3-116 mg/g creatinine c) < 2 mg/g creatinine	a) 48 mg/g creatinine b) 43 mg/g creatinine c) < 2 mg/g creatinine	a) Morning samples, exposed workers b) Afternoon samples, exposed workers c) Controls Exposure levels of trichloroethylene: 17(-420 mg/Cu m CHLORINE ORGANIC COMPOUNDS; URINE; METABOLITES; OCCUPATIONAL HAZARDS; OHIO	Lowry, L.K. Vandervort, R. Polakoff, P.L. 1978
1611 Urine	Ingestion Rectal		9	a) Not given b) Not given c) Not given d) Not given	a) 7.17 + or - 7.67 mg b) 11.62 + or - 6.30 mg c) 19.48 + or - 7.15 mg d) 10.08 + or - 7.17 mg	a) 500 mg equivalents of chloral hydrate, oral b) 500 mg equivalents of chloral hydrate, rectal c) 500 mg equivalents of chloral betaine, oral d) 500 mg equivalents of chloral betaine, rectal Values are for trichloroacetic acid excreted in 24 hr. Healthy, males, ages 23-29 yr, fasted before and after dose. DRUGS; COMPARATIVE EVALUATIONS; URINE; ADULTS	Simpson, H. Parrott, E.L. 1980

Adriamycin (8 CI)
5,12-Naphthacenedione, 10-((3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy)-7,8,9,10-tetrahydro- 6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S-cis)- (9 CI)
23214-92-8
C27-H29-N-O11
MW 543.56, MP 169-170.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1612 Blood, plasma	Injection	HPLC	5	3.98X10(E-7) - 0.739X10(E-7)moles	Not applicable	Hepatic venous anthracycline, 2 and 12 hr after 4-hr IV of 85 mg/sq m in hepatic artery. 3.05X10(E-7)M at 0.25 hr (initial value). Estimated from graph. Data available for other doses. Patients with breast cancer cf adenocarcinoma of bile duct, progressive hepatic disease, but no cardiovascular disease or renal dysfunction. ?-mo disappearance of hepatic disease in 1 patient. Partial response in 3 of the other 4 for 1-4 months. Myelosuppression 12-14 days, all patients. Leukopenia and thrombocytopenia, followed by sepsis and death in one. DRUGS; CHEMOTHERAPY; NEOPLASES; BLOOD PLASMA	Garnick, M.B. Ensminger, W.D. Israel, M. 1979

Alanine, 3-((carboxymethyl)thio)-, L- (8 CI)
L-Cysteine, S-(carboxymethyl)- (9 CI)
638-23-3
C5-H9-N-O4-S
MW 179.21, MP 204-207 C (L-form)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1613 Blood, plasma	Ingestion	GC	11	2-13 ug/ml	Not given	1.0-g dose in capsule or suspension form, levels up to 10 hr after. Peaks occurred within 2 hr. Estimated from graph. Normal adults DRUGS; BLOOD PLASMA	Maynard, W.R. Bruce, R.B. Fox, G.G. 1978
1614 Urine	Ingestion	GC/MS HPLC	3	Not given	99.9%	Percent of 1000-mg dose (50 uCi of S35/subject) excreted in 72 hr in original form or as metabolites. Normal subjects (wt 118 kg, 52 kg, and 70 kg). DRUGS; AMINO ACIDS; URINE; METABOLITES	Turnbull, L.B. Teng, L. Kinzie, J.M. Pitts, J.E. Pinchbeck, F.H. Bruce, R.B. 1978

Alanine, 3-(3,4-dihydroxyphenyl)-, L- (8 CI)
6-Tyrosine, 3-hydroxy- (9 CI)
59-92-7
C9-H11-N-04
MW 197.19

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1615 Blood, plasma	Injection Ingestion		11	a) 0.89-0.015 mg/l b) 0.035-0.18 mg/l c) 1.9-0.11 mg/l d) 0.20-1.325 mg/l	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Levodopa 20 and 200 min after start of 50 mg IV over 20 min. Initial value, 0.68 mg/l at 10 min (5 subjects) b) Total dopamine 10 and 45 min after start of 50 mg IV levodopa over 20 min. 0.06 mg/l at 200 min, final value (5 subjects) c) Levodopa 1 and 6 hr after 1000 mg, oral. Initial value, 0.825 mg/l at 0.5 hr (6 subjects) d) Total dopamine 0.5 and 2 hr after 1000 mg levodopa, oral. 0.425 mg/l at 6 hr, final value (8 subjects) Range of means. Estimated from graphs. Parkinsonian patients, ages 51-74 yr. Drugs for disease withdrawn 3 days before study. DRUGS; NEUROMUSCULAR DISEASES; BLOOD PLASMA; DOGS; URINE; JAPAN; COMPARATIVE EVALUATIONS; ADULTS; DRUG THERAPY	Sasahara, K. Hitanai, T. Habara, T. Horioka, T. Nakajima, H. 1980
1616 Urine	Injection Ingestion		11	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.5 % of dose b) 11.2 % of dose c) 11.8 % of dose d) 29.6 % of dose e) 0.58 % of dose f) 13.5 % of dose g) 15.1 % of dose h) 18.2 % of dose	a) Total levodopa b) Total dopamine c) Total 3,4-dihydroxyphenylacetic acid d) Total homovanillic acid e) Total levodopa f) Total dopamine g) Total 3,4-dihydroxyphenylacetic acid h) Total homovanillic acid 48-hr cumulative excretions after 50 mg IV (a-d), or 1000 mg, oral (e-h). Parkinsonian patients, ages 51-74. Drugs for disease withdrawn 3 days before study. DRUGS; NEUROMUSCULAR DISEASES; BLOOD PLASMA; DOGS; URINE; JAPAN; COMPARATIVE EVALUATIONS; ADULTS; DRUG THERAPY	Sasahara, K. Hitanai, T. Habara, T. Horioka, T. Nakajima, H. 1980

Aluminum
7429-90-5
Al
Atw 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1617 Blood		ES	14	Not given	12.5 + or - 4.0 ug/l	Healthy subjects ALUMINUM; MEASUREMENT METHODS; FRANCE; BLOOD; URINE; METALS	Allain, P. Mauras, Y. 1979
1618 Blood, serum						Review REVIEW; METALS; ALUMINUM; TRACE ELEMENTS; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; BLOOD SERUM	Sorenson, J.R.J. Campbell, I.R. Tepper, L.B. Lingg, R.D. 1974
1619 Blood, serum		AAS	8	2.1-6.2 ug/l	3.72 + or - 1.2 ug/l	Summary of widely differing literature values. Healthy adults. ALUMINUM; MEASUREMENT METHODS; BLOOD PLASMA; BLOOD SERUM; BELGIUM; METALS; COMPARATIVE EVALUATIONS	Versieck, J. Cornelis, R. 1980
1620 Hair		NA	11	21.6-38.2 ppm	30.6 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1621 Kidney		ES	a) 132 b) 74 c) 86	a) Not given b) Not given c) Not given	a) 9.43 ppm b) 10.1 ppm c) 12.0 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapranit, S. Alexander, G.V. Gonick, H.C. 1974

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Aluminum
7429-90-5
Al
Atw 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1622 Liver		ES	a) 78 b) 44 c) 75	a) Not given b) Not given c) Not given	a) 12.0 ppm b) 12.5 ppm c) 12.9 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures. Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1623 Lung		ES	30	500.0-18570.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, H.J. Holtz, J.L. Gorski, C.H. 1967
1624 Lung		X-ray spectros	2	a) Not given b) Not given	a) 17 particles b) 109 particles	a) Case 1,500 particles analyzed b) Case 2,500 particles analyzed 10% of particles in air filters were Al. 2 welders: 1 who did air-arc welding in open spaces, and one who did arc welding in confined spaces. Case 1, moderate non-specific lung disease with obstructive and restrictive components. Case 2, severe restrictive lung disease. Interstitial fibrosis and dispersed aggregates of macrophages containing, dark brown and black particulates. METALS; ALUMINUM; OCCUPATIONAL HAZARDS; MEASUREMENT METHODS; LUNGS	Stettler, L.E. Groth, D.H. Mackay, G.R. 1977
1625 Nail		NA	a) 50 b) 50 c) 38 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 18.2 ug/g dry wt b) 36.6 ug/g dry wt c) 73.3 ug/g dry wt d) 89.8 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schaeschula, R.G. 1976

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Aluminum
7429-90-5
Al
AtW 26.98154, MP 660 C, BP 2327 C, VP 1 mm Hg at 1540 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1626 Spleen		ES	a) 92 b) 39 c) 76	a) Not given b) Not given c) Not given	a) 10.7 ppm b) 10.2 ppm c) 16.1 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures b) and c) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
1627 Urine		ES	14	Not given	4.7 + or - 2.5 ug/l	Healthy subjects ALUMINUM; MEASUREMENT METHODS; FRANCE; BLOOD; URINE; METALS	Allain, P. Mauras, Y. 1979

Ammonia
7664-41-7
N3-H
MW 17.03, MP -77.7 C, BP -33.35 C, VP 10 atm at 25.7 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1628 Blood, plasma		Colorimetry	a) 20 b) 10 c) 5 d) 10	a) Not given b) Not given c) Not given d) Not given	a) 45.9 + or - 4.5 ug/kg b) 70.7 + or -18.6 ug/dl c) 76.8 + or - 20.8 ug/dl d) 82.6 + or - 16.7 ug/dl	a) Controls, ages 20-60 yr b) Hemodialyzed patients, ages 30-64 yr c) Peritoneal dialyzed patients, ages 44-65 yr d) Nondialyzed patients differed from controls, P<0.001. Patients with chronic renal failure. ZINC; METALS; MINERAL METABOLISM; BLOOD PLASMA; ERYTHROCYTES; LEUKOCYTES; HAIR; DISEASES; ADULTS; COMPARATIVE EVALUATIONS; AMMONIA	Mahajan, S.K. Prasad, A.S. Rabbani, P. Briggs, W.A. McDonald, F.D. 1979

Ammonium, (3-carboxy-2-hydroxypropyl)trimethyl-, hydroxide, inner salt, L- (8 CI)
1-Propanaminium, 3-(carboxy-2-hydroxy-N,N,N-trimethyl-, hydroxide, inner salt, (R)- (9 CI)
541-15-1
C7-H15-N-O3
MW 161.20, MP 197-198 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1629 Blood		Enzymatic Colorimetry Radiometry				Review Patients with diseases. METABOLISM; DISEASES; REVIEW; JAMAICA; JAPAN; VITAMINS; MUSCLES; BLOOD SERUM; BLOOD PLASMA; BLOOD; URINE	Mitchell, H.E. 1978
1630 Blood, plasma		Enzymatic Colorimetry Radiometry				Review Patients with diseases. METABOLISM; DISEASES; REVIEW; JAMAICA; JAPAN; VITAMINS; MUSCLES; BLOOD SERUM; BLOOD PLASMA; BLOOD; URINE	Mitchell, H.E. 1978
1631 Blood, serum		Enzymatic Colorimetry Radiometry				Review Patients with diseases. METABOLISM; DISEASES; REVIEW; JAMAICA; JAPAN; VITAMINS; MUSCLES; BLOOD SERUM; BLOOD PLASMA; BLOOD; URINE	Mitchell, H.E. 1978
1632 Muscle		Enzymatic				Review Patients with diseases. METABOLISM; DISEASES; REVIEW; JAMAICA; JAPAN; VITAMINS; MUSCLES; BLOOD SERUM; BLOOD PLASMA; BLOOD; URINE	Mitchell, H.E. 1978
1633 Urine		Enzymatic Colorimetry				Review METABOLISM; DISEASES; REVIEW; JAMAICA; JAPAN; VITAMINS; MUSCLES; BLOOD SERUM; BLOOD PLASMA; BLOOD; URINE	Mitchell, H.E. 1978

Ammonium, trimethyl(1-methyl-2-phenothiazin-10-ylethyl)-, methyl sulfate (8 CI)
10H-Phenothiazine-10-ethanaminium, N,N,N,alpha-tetramethyl-, methyl sulfate (9 CI)
58-34-4
C18-H23-N2-S.C-H3-O4-S
MW 410.55, MP 206-210 C (some decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1634 Blood, plasma	Rectal	GC	7	45-290 ng/ml	103 + or - 89 ng/ml	Peaks, 63 + or - 42 min after 194.6 mg. 90% in urine by 7 hr, half unchanged, half as sulfoxide. Males with generalized obstructive lung disease. AMMONIUM COMPOUNDS; DRUGS; DRUG THERAPY; DISEASES; BLOOD PLASMA; METABOLITES	Jonkman, J.H.G. van Bork, L.E. Wifsbeek, J. Bolhuis-de Vries, A.S. deZeeuw, R.A. Orie, N.G.M. Cox, M.L.H. 1979
1635 Blood, plasma	Injection		7	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 550 ng/ml b) 20 ng/ml c) 170 ng/ml d) 30 ng/ml	a) IV, 3 min after 6.25 mg b) IV, 105 min after 6.25 mg c) IM, peak, 6 min after 6.25 mg d) IM, 105 min after 6.25 mg Estimated from graph. IV peak at <3 min. DRUGS; BLOOD PLASMA; NETHERLANDS; COMPARATIVE EVALUATIONS	Jonkman, J.H.G. van Bork, L.E. deZeeuw, R.A. Orie, N.G.M. 1976

Aniline (8 CI)
Benzenamine (9 CI)
62-53-3
C6-H7-N
MW 93.12, BP 184-186 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1636 Urine	Ingestion		6	Not given	6.9%	6x100 mg tablets of phenazopyridine hydrochloride % of dose in 24-hr urine. 6 healthy males, aged 25-40 yrs. DRUGS; METABOLITES; URINE; CANADA	Johnson, W.J. Chartrand, A. 1976

Anthranilic acid, N-(8-(trifluoromethyl)-4-quinolyl)-, 2,3-dihydroxypropyl ester (8 CI)
Benzoic acid, 2-((8-(trifluoromethyl)-4-quinolinyl)amino)-, 2,3-dihydroxypropyl ester (9 CI)
23779-99-9
C20-H17-F3-N2-O4
MW 406.37, MP 179-180 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1637 Blood	Ingestion	Colorimetry TLC	7	Not given	None detected	Detected only as metabolite, floctafenic acid Healthy males, ages 21-28 yr. DRUGS; DRUG THERAPY; BLOOD; ADULTS; OREGON; METABOLITES; IN VITRO ANALYSIS	Lynn, R.K. Hola, E. Swanson, B.N. Smith, E. Gerber, N. 1979

Anthranilic acid, 4-chloro-N-furfuryl-5-sulfamoyl- (9 CI)
Benzoic acid, 5-(aminosulfonyl)-4-chloro-2-((2-furanylmethyl)amino)- (9 CI)
54-31-9
C12-H11-Cl-N2-O5-S
MW 330.77, MF 206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1638 Blood, serum	Injection	Fluorometry	5	6.3-14.6 ug/ml	11.0 ug/ml	After single dose, 120 mg, IV Adults, 62.0-75.4 kg. Functionally anephric patients had higher distribution volume, longer plasma half-life, lesser clearance, and more rapid non-renal elimination of drug than normals. BLOOD PLASMA; BLOOD SERUM; DRUG THERAPY; URINE	Cutler, R.E. Forrey, A.W. Christopher, T.G. Kimpel, B.M. 1974
1639 Blood, serum	Injection	Fluorometry	a b c	a) 2.6-6.5 ug/ml b) 6.3-8.9 ug/ml c) 7.5-25.6 ug/ml	a) 4.73 ug/ml b) 9.1 ug/ml c) 15.3 ug/ml	a) After 40-mg dose IV b) Time zero following 80-mg dose c) Time zero following 120-mg dose Healthy males, 15-44 yr old, 45.5-72 kg. Functionally anephric patients had higher distribution volume, longer plasma half-life, lesser clearance, and more rapid non-renal elimination of drug than normals. BLOOD PLASMA; BLOOD SERUM; DRUG THERAPY; URINE	Cutler, R.E. Forrey, A.W. Christopher, T.G. Kimpel, B.M. 1974
1640 Urine	Injection	TLC Fluorometry	a) 6 b) 6	a) 128-0.3 ug/min b) 245-0.6 ug/min	a) Not applicable b) Not applicable	a) Hypertensive patients b) Controls Range of mean rates of clearance 0-1 hr and 12-24 hr after 80 mg. Patients with severe hypertension <6 mo, with vascular complications, ages 42-63 yr, normal controls. All fasted. DRUGS; DRUG THERAPY; HYPERTENSION; DERMARK; PROTEINS; DIURETICS; URINE; ADULTS; COMPARATIVE EVALUATIONS; SODIUM	Andreasen, F. Pedersen, O.L. Mikkelsen, E. 1978
1641 Urine	Injection	Fluorometry	4	a) 18.4-39.6 mg b) 38.4-69.6 mg c) 55.8-118.8 mg	a) 27.1 mg b) 50.3 mg c) 87.8 mg	a) Renal excretion following dose of 40 mg, remainder nonrenal b) Renal excretion following dose of 80 mg, remainder nonrenal c) Renal excretion following dose of 120 mg, remainder nonrenal Healthy males, 15-44 yr old, 45.5-72 kg weight. Functionally anephric patients had higher distribution volume, longer plasma half-life, lesser clearance, and more rapid non-renal elimination of drug than normals. BLOOD PLASMA; BLOOD SERUM; DRUG THERAPY; URINE	Cutler, R.E. Forrey, A.W. Christopher, T.G. Kimpel, B.M. 1974

Antimony
7440-36-0
Sb
AtW 121.75, MP 630 C, BP 1635 C, VP 1 mm Hg at 886 C, 10 mm Hg at 960 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1642 Blood	Inhalation		a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) <0.014 mg/kg b) <0.013 mg/kg c) <0.067 mg/kg d) <0.085 mg/kg e) <0.024 mg/kg	a) Worker who cleaned drain b) Worker who cleaned drain c) Other worker nearby d) Other worker nearby e) Supervisor Waste herbicide gave rise to arsine. Hemolytic anemia, renal failure, vomiting, renal impairment ANTIMONY; ARSENIC; ARSENIC ORGANIC COMPOUNDS; ANEMIA; BLOOD; METALS; PESTICIDES; INDUSTRIAL MEDICINE; KIDNEYS; URINE	Parish, G.G. Glass, H. Kinbrough, H. 1979
1643 Hair		NA	11	Not detectable-3.10 ppm	1.25 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1644 Urine	Inhalation		a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.035 mg/kg b) <0.011 mg/kg c) <0.093 mg/kg d) 0.089 mg/kg e) <0.029 mg/kg	a) Worker who cleaned drain b) Worker who cleaned drain c) Other worker nearby d) Other worker nearby e) Supervisor Waste herbicides give rise to arsine. Hemolytic anemia, renal failure, vomiting, renal impairment ANTIMONY; ARSENIC; ARSENIC ORGANIC COMPOUNDS; ANEMIA; BLOOD; METALS; PESTICIDES; INDUSTRIAL MEDICINE; KIDNEYS; URINE	Parish, G.G. Glass, H. Kinbrough, H. 1979

Antipyrine (8 CI)
3H-Pyrazol-3-one, 1,2-dihydro-1,5-dimethyl-2-phenyl- (9 CI)
60-80-0
C11-H12-N2-O
MW 188.22, MP 111-113 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1645 Blood, plasma	Ingestion	Colorimetry	9	28-8.53 ug/ml	Not applicable	2 and 24 hr after 18 mg/kg. Values in saliva and plasma similar about 1 hr after oral dose. Healthy volunteers on no other drugs >2 wk and with coffee and alcohol intake modest to nil. Ages 23-60 yr. Fasted overnight. DRUGS; ANALGESICS; ANTIPYRETICS; MEASUREMENT METHODS; SALIVA; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ANIMAL POPULATIONS	Welch, R.M. DeAngelis, R.L. Wingfield, M. Farmer, T.W. 1975
1646 Saliva	Ingestion	Colorimetry	9	29.07-8.63 ug/ml	Not applicable	2 and 24 hr after 18 mg/kg. Values in saliva and plasma similar about 1 hr after oral dose. Healthy volunteers on no other drugs >2 wk and with coffee and alcohol intake modest to nil. Ages 23-60 yr. Fasted overnight. DRUGS; ANALGESICS; ANTIPYRETICS; MEASUREMENT METHODS; SALIVA; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ANIMAL POPULATIONS	Welch, R.M. DeAngelis, R.L. Wingfield, M. Farmer, T.W. 1975
1647 Urine	Ingestion	HPLC	6	68.4-78.0%	73.7%	% of dose in 48-hr urine. Plasma half-life and clearance highly correlated with that of antipyrine. Student non-smokers. Ages 21-33. DIAZEPAMS; ANALGESICS; WISCONSIN; DRUGS; METABOLISM	Kellermann, G.H. Luyten-Kellermann, M. 1979

Arsenic
7440-38-2
As
Atw 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1648 Blood	Inhalation		a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.18 ug/kg b) 0.20 ug/kg c) <0.082 ug/kg d) <0.096 ug/kg e) <0.044 ug/kg	a) Worker who cleaned drain b) Worker who cleaned drain c) Other worker nearby d) Other worker nearby e) Supervisor Waste herbicides gave rise to arsine. Hemolytic anemia, renal failure, vomiting, renal impairment ANTIMONY; ARSENIC; ARSENIC ORGANIC COMPOUNDS; ARSINE; BLOOD; METALS; PESTICIDES; INDUSTRIAL MEDICINE; KIDNEYS; URINE	Parish, G.G. Glass, R. Kimbrough, R. 1979
1649 Blood			8	a) Not detectable b) 0.02-0.08 ppm	a) Not applicable b) Not given	a) 6 of 8 cases b) 2 of 8 cases Chinese-herb-induced As poisonings. Poisoning cases from Singapore General Hospital. Symptoms include hyperpigmentation, hyperkeratosis of palms and soles, depigmentations, palmar and plantar hyperhidrosis, multiple arsenical keratoses on trunk and limbs, skin cancers on limbs and trunk, basal cell carcinoma, Bowen's disease, toxic sensorimotor polyneuropathy, fine finger tremors, chronic headache, lethargy, weakness, insomnia, acute or subacute gastritis or gastroenteritis, acute toxic hepatitis, Fe deficiency anemia, squamous-cell carcinoma. ARSENIC; HAIR; NAILS; URINE; BLOOD; SINGAPORE; METAL POISONING; METALS	Tay, C.-H. Seah, C.-S. 1975
1650 Blood, serum			1	Not applicable	2500 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
1651 Blood, whole	Dermal	AAS	a) 69 b) 35	a) Not given b) Not given	a) 0.32 ug/100 ml b) 0.20 ug/100 ml	a) Exposed workers b) Controls Workers employed at least 1 yr at secondary Pb smelter and controls from nearby Al processing plant in California. METALS; ARSENIC; LEAD; BLOOD; BLOOD PLASMA; HAIR; COMPARATIVE EVALUATIONS; HEARING; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; INDUSTRIES; SMELTERS; CALIFORNIA	Baloh, R.W. Spivey, G.H. Brown, C.P. Morgan, D. Campion, D.S. Browdy, B.L. Valentine, J.L. Gonick, H.C. Massey, F.J. Culver, B.D. 1979

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Arsenic
7440-38-2
As
Atw 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 480 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1652 Blood, whole	Dermal Inhalation	AAS	a) 69 b) 35	a) Not given b) Not given	a) 0.32 ug/dl b) 0.20 ug/dl	a) Smelter workers b) Controls Air levels for Pb, Cd, and As also given. Lead smelter workers, mean age 42.5 yr, mean employment 11.3 yr. Controls, mean age 49.7 yr, mean employment 8.4 yr. All from California. METALS; LEAD; ARSENIC; CADMIUM; BLOOD; ADULTS; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; CALIFORNIA	Spivey, G.H. Brown, C.P. Baloh, R.W. Campion, D.S. Valentine, J.L. Massey, F.J. Browdy, B.L. Culver, B.D. 1979
1653 Blood, whole	Ingestion	AAS	a) 33 b) 21 c) 38 d) 28 e) 24	a) 0.18-5.5 ug/100 ml b) 0.08-0.73 ug/100 ml c) 0.03-0.85 ug/100 ml d) 0.01-3.50 ug/100 ml e) 0.25-0.78 ug/100 ml	a) 1.33 + or - 1.18 ug/100 ml b) 0.42 + or - 0.17 ug/100 ml c) 0.29 + or - 0.18 ug/100 ml d) 0.51 + or - 0.65 ug/100 ml e) 0.49 + or - 0.12 ug/100 ml Mean + or - SD	a) 393 ug/l in drinking water b) 123 ug/l in drinking water c) 98 ug/l in drinking water d) 51 ug/l in drinking water e) <6 ug/l in drinking water Hair and urine levels reflected intake, blood levels did not. Residents, for not <1 yr (average residence: 8.3 + or - 2.8 to 9.6 + or - 8 yr), of 2 CA and 3 NV communities. Average age: 26 + or - 15 to 44 + or - 18 yr, 23-43% smokers. METALS; ARSENIC; WATER POLLUTION; DRINKING WATER; BLOOD; URINE; HAIR; COMPARATIVE EVALUATIONS; BIOACCUMULATION; CALIFORNIA; NEVADA	Valentine, J.L. Kang, H.K. Spivey, G.H. 1979
1654 Hair	Ingestion	AAS	a) 36 b) 29 c) 97 d) 67 e) 30 f) 49	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 5.74 ug/g b) 2.29 ug/g c) 0.46 ug/g d) 0.43 ug/g e) 0.51 ug/g f) 3.29 ug/g	a) Bottled drinking water b) Switched from well water to bottled water in preceeding 3 mo c) Well water, > 100 ug/l d) Well water, > or = 50 ug/l e) Well water, 50-99 ug/l f) Well water, < or = 100 ug/l. Group f) significantly different from groups c), d) and e). Residents of Ester Dome, Alaska ALASKA; ARSENIC; DRINKING WATER; URINE; NAILS; HAIR; TRACE ELEMENTS; HEALTH HAZARDS	Harrington, J.M. Middaugh, J.P. Morse, D.L. Bosworth, J. 1978
1655 Hair	Dermal	AAS	a) 69 b) 35	a) Not given b) Not given	a) 7.4 ug/g b) 1.2 ug/g	a) Exposed workers b) Controls Workers employed at least 1 yr at secondary Pb smelter and controls from nearby Al processing plant in California. METALS; ARSENIC; LEAD; BLOOD; BLOOD PLASMA; HAIR; COMPARATIVE EVALUATIONS; HEARING; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; INDUSTRIES; SMELTERS; CALIFORNIA	Baloh, R.W. Spivey, G.H. Brown, C.P. Morgan, D. Campion, D.S. Browdy, B.L. Valentine, J.L. Gonick, H.C. Massey, F.J. Culver, B.D. 1979

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Arsenic
7440-38-2
As
Atw 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1656 Hair		NA	11	Not detectable-1.15 ppm	0.50 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1657 Hair	Ingestion	Chem	a) 204 b) 274	a) Not given b) 0-1.80 mg-%	a) 0.92 mg-% b) 0.27 mg-% For samples over 0.10 mg-%	a) 1968-1970 b) 1976 Children and adults born and living in Antofagasta, Chile. Raynaud's syndrome, ischemia, myocardial infarction, mesenteric thrombosis, bronchiectasis ARSENIC; HAIR; NAILS; DRINKING WATER; COMPARATIVE EVALUATIONS; HEALTH HAZARDS; ADULTS; CHILDREN; CHILE	Borgono, J.M. Vicent, P. Venturino, H. Infante, A. 1977
1658 Hair			1	Not applicable	12 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
1659 Hair	Ingestion	AAS	a) 35 b) 21 c) 45 d) 25 e) 10	a) 0.36-4.31 ug/g b) 0.01-1.39 ug/g c) 0.08-2.42 ug/g d) 0.07-0.44 ug/g e) 0.04-0.39 ug/g	a) 1.16 + or - 0.80 ug/g b) 0.50 + or - 0.37 ug/g c) 0.57 + or - 0.45 ug/g d) 0.48 + or - 0.44 ug/g e) 0.15 + or - 0.11 ug/g Mean + or - S.D.	a) 393 ug/l in drinking water b) 123 ug/l in drinking water c) 98 ug/l in drinking water d) 51 ug/l in drinking water e) <6 ug/l in drinking water Hair and urine levels reflected intake, blood levels did not. Residents, for not <1 yr (average residence: 4.3 + or - 2.8 to 9.6 + or - 8 yr), of 2 CA and 3 NV communities. Average age: 26 + or - 15 to 44 + or - 14 yr, 23-43% smokers. METALS; ARSENIC; WATER POLLUTION; DRINKING WATER; BLOOD; URINE; HAIR; COMPARATIVE EVALUATIONS; BIOACCUMULATION; CALIFORNIA; NEVADA	Valentine, J.L. Kang, H.K. Spivey, G.H. 1979

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Arsenic
7440-38-2
As
At# 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1660 Hair	Ingestion		74	a) Not detectable b) 1.0-5.0 ppm c) 5.1-10.0 ppm d) 10.1-20.0 ppm e) >20.1 ppm	a) Not applicable b) Not given c) Not given d) Not given e) Not given	a) 41 of 74 cases b) 17 of 74 cases c) 6 of 74 cases d) 8 of 74 cases e) 2 of 74 cases Chinese-herb-induced As poisonings. 39 males, 35 females, 70 Chinese, 1 Malay, 3 Indian. 52 had chronic poisoning, 22 had acute poisoning. All were patients at Singapore General Hospital. Symptoms include hyperpigmentation, hyperkeratosis of palms and soles, depigmentations, palmar and plantar hyperhidrosis, multiple arsenical keratoses on trunk and limbs, skin cancers on limbs and trunk, basal cell carcinoma, Bowen's disease, toxic sensorimotor polyneuropathy, fine finger tremors, chronic headache, lethargy, weakness, insomnia, acute or subacute gastritis or gastroenteritis, acute toxic hepatitis, Fe deficiency anemia, squamous-cell carcinoma. ARSENIC; HAIR; NAILS; URINE; BLOOD; SINGAPORE; METAL POISONING; METALS	Tay, C.-H. Seah, C.-S. 1975
1661 Kidney			1	Not applicable	>5 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
1662 Liver			5	1.2-73 ppm	39.5 ppm	Poisoning fatalities PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
1663 Nail	Ingestion	AAS	a) 36 b) 29 c) 97 d) 67 e) 30 f) 49	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 5.43 ug/g b) 4.34 ug/g c) 4.18 ug/g d) 5.06 ug/g e) 2.66 ug/g f) 7.58 ug/g	a) Bottled drinking water b) Switched from well water to bottled water in preceeding 3 mo c) Well water, > 100 ug/l d) Well water, > or = 50 ug/l e) Well water, 50-99 ug/l f) Well water, < or = 100 ug/l Group f) significantly different from c), d), and e). Residents of Ester Dome, Alaska ALASKA; ARSENIC; DRINKING WATER; URINE; NAILS; HAIR; TRACE ELEMENTS; HEALTH HAZARDS	Harrington, J.M. Middaugh, J.P. Morse, D.L. Housworth, J. 1978

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Arsenic
7440-38-2
As
Atw 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1664 Nail	Ingestion	Chem	a) 26 b) 273	a) Not given b) 0-7.50 mg-%	a) 2.86 mg-% b) 1.41 mg-%	a) 1968 b) 1976 Values for samples over 0.10 mg-% Children and adults born and living in Antofagasta, Chile. Raynaud's syndrome, ischemia, myocardial infarction, mesenteric thrombosis, bronchiectasis ARSENIC; HAIR; NAILS; DRINKING WATER; COMPARATIVE EVALUATIONS; HEALTH HAZARDS; ADULTS; CHILDREN; CHILE	Borgono, J.M. Vicent, P. Venturino, H. Infante, A. 1977
1665 Nail			4	a) Not detectable b) 1.0-5.0 ppm	a) Not applicable b) Not given	a) 2 of 4 cases b) 2 of 4 cases Chinese-herb-induced As poisonings. Poisoning cases from Singapore General Hospital. Symptoms include hyperpigmentation, hyperkeratosis of palms and soles, depigmentations, palmar and plantar hyperhidrosis, multiple arsenical keratoses on trunk and limbs, skin cancers on limbs and trunk, basal cell carcinoma, Bowen's disease, toxic sensorimotor polyneuropathy, fine finger tremors, chronic headache, lethargy, weakness, insomnia, acute or subacute gastritis or gastroenteritis, acute toxic hepatitis, Fe deficiency anemia, squamous-cell carcinoma. ARSENIC; HAIR; NAILS; URINE; BLOOD; SINGAPORE; METAL POISONING; METALS	Tay, C.-H. Seah, C.-S. 1975
1666 Urine	Ingestion	AAS	a) 36 b) 29 c) 97 d) 67 e) 30 f) 49	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.31 ug/100 ml b) 3.92 ug/100 ml c) 4.05 ug/100 ml d) 3.83 ug/100 ml e) 4.52 ug/100 ml f) 17.83 ug/100 ml	a) Bottled drinking water b) Switched from well water to bottled water in preceding 3 mo c) Well water, > 100 ug/l d) Well water, > or = 50 ug/l e) Well water, 50-99 ug/l f) Well water < or = 100 ug/l Group f) significantly different from groups c), d), and e). Intake correlated with urine As. Residents of Ester Dome, Alaska ALASKA; ARSENIC; DRINKING WATER; URINE; NAILS; HAIR; TRACE ELEMENTS; HEALTH HAZARDS	Harrington, J.M. Middaugh, J.P. Morse, D.L. Houseworth, J. 1978
1667 Urine	Ingestion	ES	1	Not applicable	50.4 ug	86% (50.4 ug) As ingested with wine was excreted within 61 hr 30 yr old male, wt 70 kg. METALS; ARSENIC; ARSENIC ORGANIC COMPOUNDS; URINE; ALCOHOLIC BEVERAGES; DRINKING WATER; FOODS; ADULTS	Crecelius, E.A. 1977

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Arsenic
7440-38-2
As
AtW 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 440 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1668 Urine	Dermal		9	a) <10-132 ug/l b) 12-28 ug/l c) Not given	a) 61.6 ug/l b) 17.75 ug/l c) <10 ug/l	a) 5 days post-exposure b) 10 days post-exposure (8 of 9) c) 19 days post-exposure 8 children, 1 adult (ages 5-38 yr) on a farm in Australia. Hematuria, abdominal pain, dysuria, blood clots in urine, headaches. METALS; ARSENIC; URINE; METAL POISONING; CASE HISTORIES; ADULTS; CHILDREN; AUSTRALIA; FARMS	Rathus, E. Stinton, H.G. Putman, J.L. 1979
1669 Urine	Ingestion	Radiometry	6	50.9-60.2%	57.9 + or - 1.5% Mean + or - S.E.	% of dose (8.9-11 uCi As74 containing approximately 0.01 ug As) excreted during first 5 days. Data also available for proportions of various chemical species. Healthy volunteers 28-60 yr old, 64-86 kg body weight METALS; ARSENIC; URINE; METABOLISM; CANADA	Tam, G.K.H. Charbonneau, S.M. Bryce, F. Pomroy, C. Sandi, E. 1979
1670 Urine	Ingestion	AAS	a) 35 b) 22 c) 46 d) 28 e) 32	a) 10.12-924.0 ug/day b) 5.7-153.14 ug/day c) 10.85-227.12 ug/day d) 10.98-280.8 ug/day e) 3.05-38.45 ug/day	a) 229.26 + or - 200.92 ug/day b) 70.47 + or - 38.18 ug/day c) 80.26 + or - 45.38 ug/day d) 63.07 + or - 56.71 ug/day e) 10.9 + or - 7.9 ug/day	a) 393 ug/l in drinking water b) 123 ug/l in drinking water c) 98 ug/l in drinking water d) 51 ug/l in drinking water e) <6 ug/l in drinking water Hair and urine levels reflected intake, blood levels did not. Residents, for not <1 yr (average residence: 8.3 + or - 2.8 to 9.6 + or - 8 yr), of 2 CA and 3 NV communities. Average age: 26 + or - 15 to 48 + or - 18 yr, 23-43% smokers. METALS; ARSENIC; WATER POLLUTION; DRINKING WATER; BLOOD; URINE; HAIR; COMPARATIVE EVALUATIONS; BIOACCUMULATION; CALIFORNIA; NEVADA	Valentine, J.L. Kang, H.K. Spivey, G.H. 1979
1671 Urine	Inhalation		a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.97 mg/kg b) 0.85 mg/kg c) 0.30 mg/kg d) 0.12 mg/kg e) <0.056 mg/kg	a) Worker who cleaned drain b) Worker who cleaned drain c) Other worker in vicinity d) Other worker in vicinity e) Supervisor Waste herbicide gave rise to arsine Hemolytic anemia, renal failure, vomiting, renal impairment ANTIMONY; ARSENIC; ARSENIC ORGANIC COMPOUNDS; ARSINE; BLOOD; METALS; PESTICIDES; INDUSTRIAL MEDICINE; KIDNEYS; URINE	Parish, G.G. Glass, E. Kimbrough, R. 1979

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Arsenic
7440-38-2
As
Atw 74.9216, MP 817 C at 28 atm, BP 613 C (sublimes), VP 1 mm Hg at 380 C, 10 mm Hg at 480 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1672 Urine			42	a) Not detectable b) 0.01-0.05 ppm c) 0.06-0.10 ppm d) 0.11-0.50 ppm e) 0.51-1.00 ppm f) 1.01-1.60 ppm	a) Not applicable b) Not given c) Not given d) Not given e) Not given f) Not given	a) 20 of 42 cases b) 8 of 42 cases c) 5 of 42 cases d) 6 of 42 cases e) 1 of 42 cases f) 2 of 42 cases Chinese-herb-induced As poisonings. Poisoning cases from Singapore General Hospital. Symptoms include hyperpigmentation, hyperkeratosis of palms and soles, depigmentations, palmar and plantar hyperhidrosis, multiple arsenical keratoses on trunk and limbs, skin cancers on limbs and trunk, basal cell carcinoma, Bowen's disease, toxic sensorimotor polyneuropathy, fine finger tremors, chronic headache, lethargy, weakness, insomnia, acute or subacute gastritis or gastroenteritis, acute toxic hepatitis, Fe deficiency anemia, squamous-cell carcinoma. ARSENIC; HAIR; NAILS; URINE; BLOOD; SINGAPORE; METAL POISONING; METALS	Tay, C.-H. Seah, C.-S. 1975
1673 Urine		NA	a) 1 b) 1	a) 28.1-1650 ug/24 hr b) 21.8-480 ug/24 hr	a) 465.2 ug/24 hr b) 250.9 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Arsenic oxide [As2O3]
1327-53-3
As2-O3
MW 197.82, MP 313 C (claudetite), 275 C (arsenolite)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1678 Urine			a) 1057 b) 852	a) 58-526 ug/l b) 67-2144 ug/l	a) 220 ug/l b) 490 ug/l	a) 1973 b) 1948-1952 Urine samples from employees of copper smelting plant in WA. ARSENIC; URINE; NEOPLASMS; SMELTERS; SMOKING; WASHINGTON; OCCUPATIONAL HAZARDS	Pinto, S.S. Henderson, V. Enterline, P.E. 1978

Asbestos
1332-21-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
RR 100.40, RP 1557 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1675 Lung	Ingestion Inhalation	Microscopy	a) 96 b) 282 c) 19 d) 19	a) Not given b) 7.42-10.05 asbestos bodies/20 cu as c) Not given d) Not given	a) 15.55 asbestos bodies/20 cu as b) Not given c) 77.7 asbestos bodies/20 cu as d) 17.1 asbestos bodies/20 cu as	a) NY city women-died 1966-1968 b) Duluth women-died 1953-1973. Range of means c) Males-lived within 1/2 mile radius of amosite asbestos factory in NJ-died 1958-1971 d) NY city men-died 1966-1968 Values for definite and probable asbestos bodies. Data also available for definite asbestos bodies only. Autopsies. Mean age at death, 69.1 yr. No subjects occupationally exposed. ASBESTOS; LUNGS; DRINKING WATER; OCCUPATIONAL HAZARDS; COMPARITIVE EVALUATIONS; AUTOPSIES; SEX; ADULTS; MINNESOTA; NEW JERSEY; NEW YORK	Auerbach, O. Hammond, E.C. Selikoff, I.J. Parks, V.R. Kaslov, H.D. Garfinkel, L. 1977

Barbituric acid, 5-(1-cyclohepten-1-yl)-5-ethyl- (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-cyclohepen-1-yl)-5-ethyl- (9 CI)
509-86-4
C13-H18-N2-O3
MW 250.29, MP 174 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1676 Blood	Ingestion	GC	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) 6.62-0.11 ug/ml b) 7.25-0.13 ug/ml c) 7.02-0.31 ug/ml d) 4.65-0.18 ug/ml e) 7.72-0.17 ug/ml f) 4.33-0.12 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Peak level to level at 60 hr b) Peak level to level at 60 hr c) Peak level to level at 60 hr d) Peak level to level at 60 hr e) Peak level to level at 60 hr f) Peak level to level at 60 hr Individuals received single therapeutic doses of 6.6 mg/kg. Healthy male volunteers BLOOD; BLOOD PLASMA; DRUGS; DRUG THERAPY	Clifford, J.H. Cookson, J.H. Wickham, P.E. 1974

Barbituric acid, 5-(1-cyclohexen-1-yl)-1,5-dimethyl- (8 CI) (VAN)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-cyclohexen-1-yl)-1,5-dimethyl- (9 CI)
56-29-1
C12-H16-N2-O3
MW 236.26, MP 145-147 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1677 Urine	Ingestion	GC GC/MS	5	a) Not given b) Not given c) Not given d) Not given	a) < 1% of dose b) 10 + or - 3% of dose c) 45 + or - 12% of dose d) 23 + or - 4% of dose	a) Hexobarbital b) 3'-Hydroxyhexobarbital c) 3'-Ketohexobarbital d) 1,5-Dimethylbarbituric acid Chemicals in 48-hr pooled urine after 400-mg dose. Healthy volunteers, aged 20-50 yr. DRUGS; METABOLISM; METABOLITES; NETHERLANDS; URINE; HYPNOTICS; ENZYMES; ADULTS	Vereeulen, H.P.F. Bakker, B.H. Schultink, J. Van der Jen, A. Breimer, D.D. 1979

Barbituric acid, 5-allyl-5-(1-methylbutyl)- (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-methylbutyl)-5-(2-propenyl)- (9 CI)
76-73-3
C12-H18-N2-O3
MW 238

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1678 Bile	Ingestion	GC	a) 2 b) 11 c) 2	a) 42-79 ug/l b) 5-371 ug/l c) 40-86 ug/l	a) 60.5 ug/l b) 77.6 ug/l c) 63.0 ug/l	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1679 Blood			77	0.0-165.0 ug/ml	12.3 ug/ml	Death caused by drug combinations Records of 123 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
1680 Blood	Ingestion	GC	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1	a) 2.02-0.15 ug/ml b) 2.14-0.16 ug/ml c) 2.12-0.07 ug/ml d) 2.12-0.06 ug/ml e) 2.21-0.15 ug/ml f) 2.19-0.13 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Peak level-level at 100 hr b) Peak level-level at 100 hr c) Peak level-level at 100 hr d) Peak level-level at 100 hr e) Peak level-level at 100 hr f) Peak level-level at 100 hr Individuals received single therapeutic doses of 3.3 ug/kg. Healthy male volunteers. BLOOD; BLOOD PLASMA; DRUGS; DRUG THERAPY	Clifford, J.H. Cookson, J.H. Richham, P.H. 1978

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Barbituric acid, 5-allyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-methylbutyl)-5-(2-propenyl)- (9 CI)
76-73-3
C12-H18-N2-O3
NB 334

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1681 Blood, whole	Ingestion	GC	28	a) 3.2-11.2 ug/ml b) 5.1-11.6 ug/ml c) 3.2-5.6 ug/ml d) 3.7-9.0 ug/ml	a) 6.5 ug/ml b) 7.0 ug/ml c) 4.6 ug/ml d) 5.8 ug/ml	a) Controls at toxicity, 670 + or - 84 ug/kg b) Patients at toxicity, 848 + or - 74 ug/kg c) Controls at 7 hr d) Patients at 7 hr 100-200 ug/hr discontinued at toxic signs. c) and d) different ($p<0.05$). Other data available. 21 patients, histories of sedative-hypnotic abuse with secobarbital the primary drug of abuse. Controls, 17-31 yr old. Drowsiness, slurred speech, ataxia, vertical and lateral nystagmus DRUGS; DRUG ABUSE; SEDATIVES; HYPNOTICS; BLOOD; COMPARATIVE EVALUATIONS	Faulkner, T.P. McGinity, J.W. Hayden, J.H. Martinez, M. Comstock, E.G. 1978
1682 Blood, whole	Ingestion	GC	a) 3 b) 14 c) 2	a) 9-13 ug/l b) 1-14 ug/l c) 6-14 ug/l	a) 11.3 ug/l b) 7.4 ug/l c) 10.0 ug/l	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1683 Kidney	Ingestion	GC	a) 3 b) 12 c) 2	a) 20-53 ug/kg b) 3-58 ug/kg c) 32-38 ug/kg	a) 34.7 ug/kg b) 30.4 ug/kg c) 35.0 ug/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-allyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-methylbutyl)-5-(2-propenyl)- (9 CI)
76-73-3
C12-H18-N2-O3
NN 134

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1684 Liver	Ingestion	GC	a) 3 b) 13 c) 2	a) 44-77 mg/kg b) 5-339 mg/kg c) 46-78 mg/kg	a) 57.3 mg/kg b) 66.0 mg/kg c) 60.0 mg/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1685 Lung	Ingestion	GC	a) 3 b) 18 c) 2	a) 20-34 mg/kg b) 2-56 mg/kg c) 14-24 mg/kg	a) 27.0 mg/kg b) 18.8 mg/kg c) 18.8 mg/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1686 Spleen	Ingestion	GC	a) 3 b) 18 c) 2	a) 30-150 mg/kg b) 3-454 mg/kg c) 37-83 mg/kg	a) 73.7 mg/kg b) 69.1 mg/kg c) 60.0 mg/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-allyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-(1-methylbutyl)-5-(2-propenyl)- (8 CI)
76-73-3
C12-H18-N2-O3
334

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1687 Urine	Ingestion	GC	a) 3 b) 10	a) 3-32 mg/l b) 1-5 mg/l	a) 13.7 mg/l b) 2.7 mg/l	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone + quinalbarbitone) ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

Barbituric acid, 5-ethyl-5-(4-hydroxyphenyl)- (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(4-hydroxyphenyl)- (9 CI)
379-38-0
C12-H12-N2-O4
MW 248.26

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1688 Urine	Ingestion	GC	3	a) 3.9-8.2 mg b) 15.4-39.7 mg	a) 6.3 mg b) 25.4 mg	a) 5 days after 30-mg dose b) 5 days after final dose, 30 mg/day for 21 days. 3 healthy males, ages 23-27 yr. DRUGS; DRUG THERAPY; WISCONSIN; ADULTS; BLOOD SERUM; SEDATIVES; URINE; HYPNOTICS; METABOLITES; ANTICONVULSANTS	Viswanathan, C.T. Booker, H.E. Welling, P.G. 1979

Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-O3
MW 226.31

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1689 Bile	Ingestion	GC	a) 3 b) 1	a) 59-152 ug/l b) Not applicable	a) 119.7 ug/l b) 138.0 ug/l	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1690 Blood		Immunoenzymatic		Not given	1470 ug/100 ml	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
1691 Blood			51	2.0-157.0 ug/ml	23.6 ug/ml	Death caused by drug combination Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
1692 Blood, whole	Injection	UV	1	Not given	4.5 mg/dl	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979

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Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-O3
MW 226.31

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1693 Blood, whole	Ingestion	GC	a) 3 b) 1	a) 10-51 mg/l b) Not applicable	a) 28.7 mg/l b) 15.0 mg/l	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, M.D. 1979
1694 Brain	Injection	UV	1	Not given	4.8 mg/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979
1695 Kidney	Injection	UV	1	Not given	2.6 mg/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979

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Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-O3
MW 226.31

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1696 Kidney	Ingestion	GC	a) 3 b) 1	a) 15.5-59 mg/kg b) Not applicable	a) 33.0 mg/kg b) 71.5 mg/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1697 Liver	Injection	UV	1	Not given	2.0 mg/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979
1698 Liver	Ingestion	GC	a) 3 b) 1	a) 20-165 mg/kg b) Not applicable	a) 77.0 mg/kg b) 133.0 mg/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-O3
MW 226.31

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1699 Lung	Ingestion	GC	a) 3 b) 1	a) 29-72 mg/kg b) Not applicable	a) 44.8 mg/kg b) 35.5 mg/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1700 Spleen	Ingestion	GC	a) 3 b) 1	a) 32-61 mg/kg b) Not applicable	a) 41.7 mg/kg b) 72.0 mg/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in 1 blood specimen. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1701 Urine	Ingestion	GC	3	5-62 mg/l	24.7 mg/l	Single barbituric acid derivative ingested Specimens collected at autopsy Hydroxylated metabolite usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-ethyl-5-(1-methylbutyl)- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylbutyl)- (9 CI)
76-74-4
C11-H18-N2-03
MW 226.31

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1702 Vitreous humor	Injection	UV	1	Not given	2.0 mg/dl	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979

Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-03
MW 226.27, MP 156-158 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1703 Bile	Ingestion	GC	a) 2 b) 11 c) 2	a) 178-198 ug/l b) 13-531 ug/l c) 148-365 ug/l	a) 188.0 ug/l b) 125.6 ug/l c) 256.5 ug/l	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1704 Blood			26	1.5-182.0 ug/ml	20.8 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.K. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5--greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
1705 Blood, whole	Injection	GC	1	Not given	0.2 mg/dl	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 40 ml polyethlene glycol-200, diluted to 100 ml with H20. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979

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Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-O3
MW 226.27, MP 156-158 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1706 Blood, whole	Ingestion	GC	a) 3 b) 10 c) 3	a) 25-36 ug/l b) 3-19 ug/l c) 7-17 ug/l	a) 32.0 ug/l b) 9.9 ug/l c) 10.7 ug/l	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-65 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1707 Brain	Injection	UV	1	Not given	0.2 ug/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 ug/dg amobarbital, 0.4 ug/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979
1708 Kidney	Injection	UV	1	Not given	0.5 ug/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 ug/dg amobarbital, 0.4 ug/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979

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Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-O3
MW 226.27, MP 156-159 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1709 Kidney	Ingestion	GC	a) 3 b) 14 c) 3	a) 32-87 mg/kg b) 6-124 mg/kg c) 8-23 mg/kg	a) 59.1 mg/kg b) 30.6 mg/kg c) 22.7 mg/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1710 Liver	Injection	UV	1	Not given	0.2 mg/dg	Postmortem analysis after I.V. self-administration of at least 40 ml of agent composed of 26 g pentobarbital, 13 g amobarbital, 20 ml isopropanol, 10 ml polyethlene glycol-200, diluted to 100 ml with H2O. Drug not detected in urine or gastric contents Tissue from injection site contained 0.1 mg/dg amobarbital, 0.4 mg/dg pentobarbital, and isopropanol. 20-yr-old, 90 kg, Caucasian male. Intense acute congestion of all organs. DRUGS; DRUG ABUSE; SUICIDE; AUTOPSIES; BLOOD; BRAIN; KIDNEYS; LIVER; VITREOUS HUMOR; MARYLAND	Clark, M.A. Jones, J.W. 1979
1711 Liver	Ingestion	GC	a) 3 b) 13 c) 3	a) 71-228 mg/kg b) 7-228 mg/kg c) 15-71 mg/kg	a) 126.7 mg/kg b) 60.4 mg/kg c) 44.7 mg/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-O3
MW 226.27, MP 156-158 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1712 Lung	Ingestion	GC	a) 3 b) 14 c) 3	a) 39.5-83.5 ug/kg b) 3.5-56.0 ug/kg c) 6.5-18.5 ug/kg	a) 55.3 ug/kg b) 20.6 ug/kg c) 13.0 ug/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1713 Spleen	Ingestion	GC	a) 3 b) 14 c) 3	a) 63-109 ug/kg b) 5-345 ug/kg c) 6-34 ug/kg	a) 81.3 ug/kg b) 55.2 ug/kg c) 21 ug/kg	a) Single barbituric acid derivative ingested b) Tuinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1714a Urine	Ingestion		2	a) 0.8-1.6% b) 31.6-46.8% c) 4.5-5.5%	a) 1.08% b) 39.3% c) 5.05%	a) Amylobarbitone b) 3'-Hydroxy-metabolite c) 3'-Carboxy-metabolite % of dose, 96 hr after 200 mg. 3 trials per subject. Levels declined monoexponentially up to 24 hr. 2 healthy volunteers DRUGS; METABOLISM; URINE	Baldeo, S.C. Gilbert, J.N.F. Powell, J.H. 1979

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Barbituric acid, 5-ethyl-5-isopentyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(3-methylbutyl)- (9 CI)
57-43-2
C11-H18-N2-O3
MP 226.27, MP 156-158 C

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TISSUE	PROBABLE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1715 Urine	Ingestion	GC	a) 2 b) 11 c) 2	a) Not applicable b) 1-12 mg/l c) 11-18 mg/l	a) 12.0 mg/l b) 5.3 mg/l c) 14.5 mg/l	a) Single barbituric acid derivative ingested b) Teinal (amylobarbitone & quinalbarbitone) ingested c) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1716 Bile	Ingestion	GC	1	Not applicable	1.0 ug/l	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1717 Blood		Immunoenzymatic		Not given	8630 ug/100 ml	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
1718 Blood, plasma	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 80.2 ug/ml b) 25.2 ug/ml c) 7.3 ug/ml d) 50.7 ug/ml e) 15.5 ug/ml	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 56 yr old man, posttraumatic epilepsy, previous suicide attempt e) 58 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and fluraxepam. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY; CASE HISTORIES	Ferrara, S.D. Tedeschi, L. Mariqo, M. Castagna, F. 1979
1719 Blood, plasma	Injection	Enzymatic	8	a) Not given b) Not given c) Not given	a) 20 ug/l b) 37 ug/l c) 15 ug/l	a) 2 wk after first dose b) 5 days after first dose c) 27 days after first dose 20 ug/kg dose followed by daily maintenance of 5 ug/kg/day. Neonates (30-40 wk) with seizures, Magee Women's Hospital in Pittsburgh, PA. DRUGS; BLOOD PLASMA; NEWBORN; DRUG THERAPY; PENNSYLVANIA	Pitlick, W. Painter, M. Pippenger, C. 1978

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Barbituric acid, 5-ethyl-5-phenyl- (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1720 Blood, plasma	Ingestion	GC	8	8.0-78.0 ug/ml	25.9 ug/ml	6 patients given Primidone (2-demoxyphenobarbital) at doses of 500-750 mg/day, other 2 given phenobarbital, 90 and 300 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, F.M. Davidson, S. Falconer, M.A. Breckenridge, A. 1974a
1721 Blood, plasma	Ingestion		1	Not applicable	16 mg/l	Initial toxicologic analysis. 18-yr-old male, in stage 4 coma, had ingested 22.5 g ethchlorvynol, 1.5 g oxazepam, 360 mg flurazepam, 540 mg phenobarbital, and 600 mg diphenhydramine. DRUGS; DRUG ABUSE; HYPNOTICS; SEDATIVES; SUICIDE; LAVAGE; BLOOD PLASMA; CASE HISTORIES; ANTICONVULSANTS; TRANQUILIZERS	Benowitz, N. Abolin, C. Toxer, T. Rosenberg, J. Rogers, W. Pond, S. Schoenfeld, P. Humphreys, M. 1980
1722 Blood, serum	Ingestion	RIA GC	3	a) 8-0.12 ug/ml b) 70-15 ug/ml	a) Not given b) Not given	a) 0 and 14 day, after 30 mg b) 0 and 11 day after final dose, 30 mg/day for 21 days Nonoexponential clearance. 3 healthy males, ages 23-27 yr. DRUGS; DRUG THERAPY; WISCONSIN; ADULTS; BLOOD SERUM; SEDATIVES; URINE; HYPNOTICS; METABOLITES; ANTICONVULSANTS	Viswanathan, C.T. Booker, H.E. Welling, P.G. 1979
1723 Blood, serum	Ingestion Injection	RIA	5	a) 0.72-0.035 meq/ml b) 0.61-0.02 meq/ml	a) Not applicable b) Not applicable	a) 30 mg, oral b) 27.4 mg IM Range of means, 2 hr and 21 days. Peaks different (P<0.05). Nonoexponential decay. Healthy volunteers 23-38 yr of age, no enzyme-inducing agents previous month and no drugs or alcohol previous wk. Fasted before and after dose. DRUGS; DRUG THERAPY; SEDATIVES; HYPNOTICS; ANTICONVULSANTS; BLOOD SERUM; COMPARATIVE EVALUATIONS; ADULTS	Viswanathan, C.T. Booker, H.E. Welling, P.G. 1978
1724 Blood, serum	Injection	GC	6	a) 3.4-12.7 ug/ml b) 19.3-50.4 ug/ml	a) 7.1 ug/ml b) 30.7 ug/ml	a) Threshold, 5 subjects b) Maximum intoxication Phenobarbital sodium IV at 0.03 to 0.04 mg/kg/min for 7.63 + or - 1.08 hr. Patients suffering from hypnosedative withdrawal symptoms. Intoxication (asleep but arousable, dysarthria, ataxia, emotional changes, nystagmus). DRUGS; DRUG THERAPY; SEDATIVES; HYPNOTICS; ANTICONVULSANTS; CANADA; BLOOD SERUM; NEUROLOGIC MANIFESTATIONS; DRUG ABUSE	Martin, P.R. Raper, R.M. Whiteside, E.A. Sellers, E.M. 1979

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Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1725 Blood, whole	Ingestion	GC	1	Not applicable	8.0 mg/l	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1726 Brain	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 20.5 ug/g b) 85.4 ug/g c) 6.2 ug/g d) 27.8 ug/g e) 26.1 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 54 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flerazepam. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY; CASE HISTORIES	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
1727 Brain	Ingestion	GC	8	3.9-26.0 ug/g	11.2 ug/g	6 patients given Primidone (2-desoxyphenobarbital) at doses of 500-750 mg/day, other 2 given phenobarbital, 90 and 300 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, F.M. Davidson, S. Falconer, M.A. Breckenridge, A. 1974
1728 Cerebrospinal fluid	Ingestion		8	2.3-89.0 ug/ml	13.1 ug/ml	6 patients given Primidone (2-desoxyphenobarbital) at doses of 500-750 mg/day, other 2 given phenobarbital, 90 and 300 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, F.M. Davidson, S. Falconer, M.A. Breckenridge, A. 1974

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Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1729 Kidney	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 32.2 ug/g b) 61.3 ug/g c) 20.4 ug/g d) 42.3 ug/g e) 16.2 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 50 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and fluranepam. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY; CASE HISTORIES	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
1730 Kidney	Ingestion	GC	1	Not applicable	3.5 mg/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-03
MW 232.23, MP 174-178 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1731 Liver	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 60.3 ug/g b) 89.2 ug/g c) 25.8 ug/g d) 56.5 ug/g e) 24.5 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 54 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and fleraxepam. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY; CASE HISTORIES	Ferrara, S.D. Tedeschi, L. Frigo, M. Castagna, F. 1979
1732 Liver	Ingestion	GC	1	Not applicable	9.0 mg/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1733 Lung	Ingestion	GC	1	Not applicable	2.0 mg/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1734 Spleen	Ingestion	GC	1	Not applicable	7.0 mg/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-ethyl-5-phenyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-phenyl- (9 CI)
50-06-6
C12-H12-N2-O3
MW 232.23, MP 174-178 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1735 Urine	Ingestion	GC	3	a) 4.0-5.3 mg b) 19.2-34.5 mg	a) 4.7 mg b) 24.8 mg	a) 5 days after 30-mg dose b) 5 days after final dose, 30 mg/day for 21 days. 3 healthy males, ages 23-27 yr. DRUGS; DRUG THERAPY; WISCONSIN; ADULTS; BLOOD SERUM; SEDATIVES; URINE; HYPNOTICS; METABOLITES; ANTICONVULSANTS	Viswanathan, C.T. Booker, H.E. Welling, P.G. 1979
1736 Urine	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 6.4 ug/ml b) 3.8 ug/ml c) 4.2 ug/ml d) 1.6 ug/ml	a) 71 yr old man, suicide b) 27 yr old woman c) 54 yr old man, posttraumatic epilepsy, previous suicide attempt d) 54 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and fluraxepam. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY; CASE HISTORIES	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
1737 Urine	Ingestion	GC	1	Not applicable	8.0 mg/l	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

Barbituric acid, 5-sec-butyl-5-ethyl-, sodium salt (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylpropyl)-, monosodium salt (9 CI)
143-81-7
C10-H16-N2-O3.Na
MW 235.27

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1738 Bile	Ingestion	GC	a) 3 b) 1	a) 27-131 mg/l b) Not applicable	a) 69 mg/l b) 24 mg/l	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1739 Blood, whole	Ingestion	GC	a) 3 b) 1	a) 18-49 mg/l b) Not applicable	a) 29.7 mg/l b) 23.0 mg/l	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1740 Kidney	Ingestion	GC	a) 3 b) 1	a) 23.5-71 mg/kg b) Not applicable	a) 41.7 mg/kg b) 48.5 mg/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-sec-butyl-5-ethyl-, sodium salt (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylpropyl)-, monosodium salt (9 CI)
143-81-7
C10-H16-N2-O3.Na
MW 235.27

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1781 Liver	Ingestion	GC	a) 3 b) 1	a) 47-83 ug/kg b) Not applicable	a) 62.7 ug/kg b) 57.0 ug/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1782 Lung	Ingestion	GC	a) 3 b) 1	a) 21-51 ug/kg b) Not applicable	a) 32.8 ug/kg b) 38.5 ug/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
1783 Spleen	Ingestion	GC	a) 3 b) 1	a) 23-68 ug/kg b) Not applicable	a) 40.3 ug/kg b) 137 ug/kg	a) Single barbituric acid derivative ingested b) Unformulated mixtures of barbiturates ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in some blood specimens. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5-sec-butyl-5-ethyl-, sodium salt (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5-ethyl-5-(1-methylpropyl)-, monosodium salt (9 CI)
143-81-7
C10-H16-N2-O3.Na
BB 235.27

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1744 Urine	Ingestion	GC	3	4-38 ug/l	22.7 ug/l	Single barbituric acid derivative ingested Specimens collected at autopsy Hydroxylated metabolites usually present in lower amounts than parent drug in fluids and tissues, and in higher amounts than parent drug in urine Ethanol in one blood specimen. From a group of 30 coroner's cases, 17-65 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

Barbituric acid, 5,5-diethyl- (9 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5,5-diethyl- (9 CI)
57-44-3
C8-H12-N2-O3
MP 184.19, BP 188-192 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
17a5 Blood, whole	Ingestion	GC	1	Not applicable	39.0 ug/l	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
17a6 Kidney	Ingestion	GC	1	Not applicable	31.0 ug/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
17a7 Liver	Ingestion	GC	1	Not applicable	47 ug/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
17a8 Lung	Ingestion	GC	1	Not applicable	35.5 ug/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979
17a9 Spleen	Ingestion	GC	1	Not applicable	37.0 ug/kg	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; AUTOPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

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Barbituric acid, 5,5-diethyl- (8 CI)
2,4,6(1H,3H,5H)-Pyrimidinetrione, 5,5-diethyl- (8 CI)
57-44-3
C8-H12-N2-O3
MP 190.75, BP 160-170 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1750 Urine	Ingestion	GC	1	Not applicable	289 ug/l	Unformulated mixture of barbiturates ingested Specimens collected at autopsy. From a group of 30 coroner's cases, 17-85 yr old, where administration of barbiturates was suspected. DRUGS; DRUG ABUSE; SEDATIVES; METABOLITES; METABOLISM; ANTICPSIES; FORENSIC MEDICINE; BLOOD; BILE; KIDNEYS; LUNGS; SPLEEN; URINE; UNITED KINGDOM	Robinson, A.E. McDowall, R.D. 1979

Barium
7440-39-3
Ba
Atw 137.34, MP 710 C (approx), BP 1600 C (approx), VP 10 mm Hg at 1049 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1751 Hair		NA	11	Not detectable-0.8 ppm	0.2 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, E. 1977
1752 Hair		ES	a) 179 b) 108 c) 102 d) 109 e) 126 f) 90 g) 71 h) 85 i) 77 j) 49	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 0.56 ug/g b) 1.30 ug/g c) 0.82 ug/g d) 2.41 ug/g e) 0.66 ug/g f) 0.63 ug/g g) 1.26 ug/g h) 1.11 ug/g i) 1.36 ug/g j) 2.34 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults e) Long Island children f) Queens children g) Bronx children h) Long Island adults i) Queens adults j) Bronx adults Correlations between hair Ba and household, hair Ba and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
1753 Kidney		ES		a) Not given b) Not given c) Not given	a) 0.96 ppm (13%) b) 1.21 ppm (15%) c) 10.8 ppm (7%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974a

(NEXT PAGE)

Barium
7440-39-3
Ba
Atw 137.34, MP 710 C (approx), BP 1600 C (approx), VP 10 mm Hg at 1009 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1754 Liver		ES		a) Not given b) Not given c) Not given	a) 1.17 ppm (9%) b) 0.20 ppm (6%) c) 10.8 ppm (73%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; RADIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapranit, S. Alexander, G.V. Gonick, H.C. 1974
1755 Lung		ES	20	Not detectable-565.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 20-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; RADIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.B. Knott, R.J. Holtz, J.L. Gorski, C.B. 1967
1756 Spleen		ES		a) Not given b) Not given c) Not given	a) 2.38 ppm (13%) b) 0.77 ppm (13%) c) 7.52 ppm (76%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; RADIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapranit, S. Alexander, G.V. Gonick, H.C. 1974

Benzamide, p-amino-N-(2-(diethylamino)ethyl)- (9 CI)
Benzamide, 4-amino-N-(2-(diethylamino)ethyl)- (9 CI)
51-06-9
C13-H21-N3-O
MW 235.37

FIGURE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSAGE	HEAD	SPECIAL INFORMATION	REFERENCE
1757 Blood		HPLC	1	Not applicable	0.6 ug/ml	Infant, 8 hr after birth (N-acetylated procainamide = 0.6 ug/ml) 375 mg/8 hr prescribed for expectant mother for approximately 7 days before delivery, but regimen apparently not followed Levels in infant blood higher than in cord and maternal blood Renal clearance of procainamide in mother 400 ml/min, in infant 0.7 ml/min, 2 days and 8 hr after birth respectively. Mother, 23 yr old at approximately 40 wks gestation (7 days before delivery) when first treated for ventricular arrhythmias CROSS; DRUG THERAPY; BLOOD SERUM; AGE; ADULTS; INFANTS; COMPARATIVE EVALUATIONS; CASE HISTORIES; BLOOD; METABOLISM; NEW YORK	Lima, J.J. Zarithy, D.R. Schentag, J.J. Jusko, W.J. 1978
1758 Blood, plasma	Injection	Colorimetry GC-EC	5	2.53-5.67 ug base/ml	4.73 ug base/ml	Steady state levels achieved after 10-16 hr on 3 mg/min infusion of the hydrochloride. Patients with acute myocardial infarction, 4 males, 1 female, ages 61-79 yr. CROSS; DRUG THERAPY; CARDIOVASCULAR DISEASES; BLOOD PLASMA; HEART DISEASES	Lalka, D. Nyman, H.G. Goldreyer, B.N. Ludden, T.M. Cannon, D.S. 1978
1759 Blood, serum	Ingestion	HPLC	1	a) Not applicable b) Not applicable c) Not applicable	a) 0.50 ug/ml b) 3.20 ug/ml c) 0.97 ug/ml	a) Mother, 5 days before delivery (N-acetylated procainamide = 0.5 ug/ml) b) Cord, at birth (N-acetylated procainamide = 0.5 ug/ml) c) Mother, 48 hr after delivery (N-acetylated procainamide = 0.95 ug/ml) Dosage: 375 mg every 8 hr, but patient apparently did not comply with prescribed regimen Levels in infant blood higher than in cord and maternal blood Renal clearance of procainamide in mother 400 ml/min, in infant 0.7 ml/min, 2 days and 8 hr after birth, respectively. Mother, 23 yr old at approximately 40 wks gestation (7 days before delivery) when first treated for ventricular arrhythmias CROSS; DRUG THERAPY; BLOOD SERUM; AGE; ADULTS; INFANTS; COMPARATIVE EVALUATIONS; CASE HISTORIES; BLOOD; METABOLISM; NEW YORK	Lima, J.J. Zarithy, D.R. Schentag, J.J. Jusko, W.J. 1978

Benzene, hexachloro-
118-74-1
C6-Cl6
MW 284.80, MP 231 C, BP 323-326 C, VP 1 mm Hg at 114.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1760 Adipose		CC GC	168	0.001-0.520 ug/g	0.062 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, B.M. Davies, D.J.A. 1977
1761 Adipose		GC-EC	3	a) 0.08-0.15 ug/g wet wt b) 0.04-0.05 ug/g wet wt c) 0.08-0.11 ug/g wet wt	a) 0.13 ug/g wet wt b) 0.05 ug/g wet wt c) 0.09 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Autopsies of accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; PHTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Mes, J. Campbell, D.S. 1976
1762 Adipose			268	Not given	5.20 mg/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Bosival, L. Uhnak, J. Madaric, A. 1977
1763 Blood		GC	194	2.6-77.9 ppb	Not given	Hyperbolic correlation with age toward a limiting value at 6-8 yr of 22 ppb for boys & 17 ppb for girls. 98 males and 96 females 1-18 yr in spring 1975, in Upper Bavaria. HEXACHLOROBENZENE; CHLORINATED HYDROCARBONS; CHILDREN; GERMANY; AGE; SEX; COMPARATIVE EVALUATIONS; BLOOD	Richter, E. Scheid, A. 1976
1764 Blood, plasma		GC-EC	a) 86 b) 42 c) 11	a) 0-23 ppb b) 0-1.8 ppb c) 14-233 ppb	a) 2.8 ppb b) 0.5 ppb c) 78.6 ppb	a) Exposed group, 21-59 yr old. Whites higher than blacks, males higher than females, those eating local produce higher than others. No age correlation b) Unexposed controls, 18-51 yr old c) Workers in chlorinated solvent plant Other data available. Exposure to chemical wastes containing hexachlorobenzene in LA. No cutaneous porphyria UPH elevated in exposed group. Urine coproporphyrin correlated with hexachlorobenzene. LOUISIANA; AGE; SEX; OCCUPATIONAL HAZARDS; CHLORINATED HYDROCARBONS; FOOD CONTAMINATION; DUST; SKIN DISEASES; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Burns, J.E. Miller, F.M. 1975

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Benzene, hexachloro-
118-74-1
C6-Cl6
MW 284.80, MP 231 C, BP 323-326 C, VP 1 mm Hg at 114.4 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1765 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-21 ng/g	a) 1 ng/g b) 1 ng/g c) 2 ng/g d) 1 ng/g e) 4 ng/g f) 2 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; MONOCHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979
1766 Milk, fat		GC-EC	33	Trace-5.13 ppm	0.091 ppm	1977-1978 study Patients at public health offices, Alberta, 17-309 days postpartum. 24 women lived in Edmonton. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, P.A. Kadis, V.W. Breitkreitz, M.E. Cunningham, G.B. Bruns, G.W. 1979
1767 Milk, whole		GC-EC	22	0.012-0.038 ppm	0.025 ppm	Survey, Western Australia, 1970-1971 22 nursing mothers, wt 46-66 kg, living within a 30 mi radius of Perth, Western Australia MILK; PESTICIDES; AUSTRALIA; DDT; DIE; DIELDRIN; HEXACHLOROBENZENE	Stacey, C.I. Thomas, B.W. 1975

Benzeneacetamide, N-(4-chlorophenyl)-N-(1-(1-methylethyl)-4-piperidinyl)-
59729-31-6
C22-H27-Cl-N2-O
MW 370.96

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1768 Blood, plasma	Injection	GC	8	900-1230 ng/ml	1065 ng/ml	10-min levels in 2 patients after 10 min IV of 1.5 mg/kg. Decline was biexponential. Patients with alcoholic cirrhosis, 38-75 yr of age. DRUGS; LIVER DISEASES; CIRRHOSIS; METABOLISM; GERMANY; BLOOD PLASMA; ADULTS; ANTIARRHYTHMIC AGENTS; ANTIPYRETICS	Klotz, U. Fischer, C. Muller-Seydlitz, P. Schulz, J. Muller, W.A. 1979
1769 Blood, plasma	Ingestion	GC-EC	5	a) 0.10-0.16 ng/ml b) 0.05-0.36 ng/ml c) 0.15-0.36 ng/ml d) 0.05-0.44 ng/ml e) 0.12-1.4 ng/ml f) 0.78-1.28 ng/ml	a) 0.14 ng/ml b) 0.22 ng/ml c) 0.25 ng/ml d) 0.23 ng/ml e) 0.41 ng/ml f) 0.95 ng/ml	a) Lorcainide, 200 mg/day (n=3) b) Lorcainide, 300 mg/day (n=5) c) Lorcainide, 400 mg/day (n=1) d) Nor-lorcainide, 200 mg/day (n=3) e) Nor-lorcainide, 300 mg/day (n=5) f) Nor-lorcainide, 400 mg/day (n=1) Maximum steady state levels. Patients with arrhythmias from cardiac or cardiovascular diseases, but no cardiac failure, renal, hepatic, or cerebral damage. Chronic therapy produced sweating and insomnia in 2 of 5 patients. 2 mg/kg IV or 300 mg orally produced ECG-time interval effects. IV (6 mg/min) gradually suppressed ventricular premature contractions related to plasma level. Nor-lorcainide also highly effective antiarrhythmic. DRUGS; DRUG THERAPY; ANTIARRHYTHMIC AGENTS; BLOOD PLASMA; METABOLITES; HEART DISEASES; COMPARATIVE EVALUATIONS; GERMANY; ADULTS	Heinertz, T. Kasper, W. Kersting, F. Just, H. Bechtold, H. Jahnchen, E. 1979
1770 Blood, plasma	Injection Ingestion	GC-EC	3	a) 0.691-1.07 ng/ml b) 0.759-1.12 ng/ml c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) 0.880 ng/ml b) 0.940 ng/ml c) 0.380 ng/ml d) 0.06 ng/ml e) 0.3 ng/ml f) 0.24 ng/ml g) <0.02 ng/ml h) 0.3 ng/ml	a) Lung afferent blood (n=2) 0-35 min after 2 mg/kg IV b) Lung efferent blood (n=2) 0-35 min after 2 mg/kg IV c) Liver afferent blood (n=1) 0-35 min after 2 mg/kg IV d) Liver efferent blood (n=10) 0-35 min after 2 mg/kg IV e) Steady state, 3X100 mg/day IV (n=1) f) Steady state, 3X100 mg/day orally (n=1) g) Norlorcainide steady state, 3X100 mg/day IV (n=1) h) Norlorcainide steady state, 3X100 mg/day orally (n=1). Patients with arrhythmias from cardiac or cardiovascular diseases, but no cardiac failure, renal, hepatic, or cerebral damage. Ages 65-77 yr. DRUGS; ANTIARRHYTHMIC AGENTS; BLOOD PLASMA; ADULTS; COMPARATIVE EVALUATIONS; GERMANY; HEART DISEASES; CARDIOVASCULAR DISEASES; METABOLISM; METABOLITES	Jahnchen, E. Bechtold, H. Kasper, W. Kersting, F. Just, H. Heykants, J. Meinertz, T. 1979

Benzenebutanoic acid, 2,4,5-triethoxy-gamma-oxo-
41826-92-6
C16-H22-O6
MW 310.38

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1771 Urine	Ingestion	GC/MS	2	Not given	57.7%	% excretion of original compound and metabolites in 24 hr after dosing (1 mg/kg) with equimolar mixture of 4 sub 3- and 4 sub 5-triethoxybenzoylpropionate. 2 males (62 and 64 kg). DRUGS; METABOLITES; URINE	Kobayashi, T. Kanai, Y. Tanayama, S. 1978

Benzeneethanol, alpha-(2-amino-1-methylethyl)-alpha-phenyl-, propanoate (ester), (S-(R*,S*))-
42576-07-8
C20-825-M-02
MW 311

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1772 Blood		GC	1	Not applicable	1.9 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
1773 Blood	Ingestion	GC	a) 27 b) 24 c) 25 d) 20	a) 0.01-0.95 mg/dl b) 0.07-3.79 mg/dl c) 0.03-1.68 mg/dl d) 0.03-0.50 mg/dl	a) 0.37 mg/dl b) 0.52 mg/dl c) 0.42 mg/dl d) 0.38 mg/dl	a) Acute exposure to propoxyphene b) Propoxyphene abuse cases c) Cause of death unknown d) Non-propoxyphene related deaths Levels of propoxyphene metabolite. 115 medical examiner cases in Maryland during 1974-1976. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
1774 Brain	Ingestion	GC	9	0.04-0.55 mg/100 g	Not given	Metabolite of propoxyphene. Selected case histories involving drug use and abuse. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
1775 Kidney	Ingestion	GC	9	b) 0.46-9.8 mg/100 g	Not given	Metabolite of propoxyphene. Selected case histories involving drug use and abuse. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
1776 Liver		GC	1	Not applicable	10 ug/g	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol Levels of norpropoxyphene also available. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
1777 Liver	Ingestion	GC	9	0.48-17.2 mg/100 g	Not given	Metabolite of propoxyphene. Selected case histories involving drug use and abuse. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977

Benzoic acid, p-(dipropylsulfamoyl)- (8 CI)
Benzoic acid, 4-((dipropylamino)sulfonyl)- (9 CI)
57-66-9
C13-H19-N-O4-S
MW 285.36, MP 194-196 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1778 Cerebrospinal fluid	Injection	Colorimetry	1	Not given	21.0 ug/ml	3 hr after 5-hr IV infusion of 75 mg/kg. No increase in homovallinic acid, but sharp increases in 5-hydroxy-indoleacetic acid, cAMP, and cGMP. Worker, aged 25 yr, occupationally exposed to Hg. BISMUTH; MERCURY; METALS; METAL POISONING; URINE; BLOOD; SPINAL FLUID; GERMANY; NEUROLOGIC MANIFESTATIONS	Cramer, H. Renaud, B. Billiard, M. Mouret, J. Hamers, R. 1978

Benzoic acid, p-amino-, 2-(diethylamino)ethyl ester (8 CI)
Benzoic acid, 4-amino-, 2-(diethylamino)ethyl ester (9 CI)
59-46-1
C13-H20-N2-O2
MW 236.30, NF 61 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1779 Blood, plasma	Injection	GC	26	3.6-11.0 ug/ml	6.6 ug/ml	After 4.8 million units of procaine penicillin G. Patients treated for gonorrhea. Toxic reactions in 0.89% of a clinic population. Responses: behavioral changes, auditory or visual disturbances, muscular twitching, or seizures. Less definite reactions: weakness, dizziness and syncope. DRUGS; SEDATIVES; BLOOD PLASMA; GEORGIA; DRUG THERAPY; ANTIBIOTICS; INFECTION; SEX	Green, R.L. Lewis, J.E. Kraus, S.J. Frederickson, E.L. 1974

Benzoic acid, 2-((8-(trifluoromethyl)-4-quinolinyl)amino)-
16783-34-1
C17-H11-F3-N2-O2
89 323

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1780 Blood	Ingestion	Colorimetry TLC	7	0.10-1.57 ug/ml	Not given	Range of means 0.25-8 hr after 400-mg floctafenin. Detected by 0.25 hr, peak 0.5-2.5 hr, cleared by 8 hr. Healthy males, ages 21-28 yr. DRUGS; DRUG THERAPY; BLOOD; ADULTS; ORGOOH; METABOLITES; IN VITRO ANALYSIS	Lynn, S.K. Hole, S. Swanson, D.R. Smith, R. Gerber, N. 1979

Benzoic acid, 2-hydroxy-, 2-carboxyphenyl ester
552-94-3
C14-H10-O5
MW 258.23, MP 230 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1781 Blood, plasma	Ingestion		10	a) Not given b) 9.63-15.70 ug/dl	a) 0.24 ug/dl b) 11.92 ug/dl	a) WK 1, placebo only b) WK 2 and 3, days 3-6, 3 g/day salsalate Declined to 0.980 ug/dl 36 hr after last dose. 20 healthy males, ages 21-50 yr. No increase in fecal blood lcss. DRUGS; DRUG THERAPY; FLORIDA; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; GASTROINTESTINAL SYSTEM	Cohen, A. 1979

Benzoic acid, 4-amino-2-chloro-
2457-76-3
C7-H6-Cl-N-O2
MW 171.59, MP 213 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1702 Blood, plasma	Injection	GC TLC	4	a) 0.2-0.71 ug/ml b) 2.2-2.6 ug/ml c) 3.5-4.3 ug/ml d) 0.6-2.2 ug/ml e) 0.6-0.8 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 2 min b) 10 min c) 30 min d) 40 min e) 60 min Plasma profiles during, after 30 min infusion of 250 mg chloroprocaine. 2 patients with 900 mg for obstetric epidurals, plasma levels of metabolite were 0.03-0.09 ug/ml in umbilical artery, 0.07-0.45 ug/ml in umbilical vein, 1.97-2.70 mg/ml in maternal vein. Healthy males and females. DRUGS; METABOLITES; BLOOD PLASMA; MEASUREMENT METHODS; URINE; NEW YORK; UMBILICAL CORD	O'Brien, J.E. Abbey, V. Minsvark, O. Perel, J. Finster, M. 1979
1703 Urine		GC TLC	2	a) 3.9-13.4 mg b) 34.1-89.3 mg	a) Not given b) Not given	a) Free compound (2.5-8.6% of dose) b) Conjugates (21.9-57.1% of dose) Amount excreted in 90 min after 30 min infusion of 250 mg. 2 women in labor. DRUGS; METABOLITES; BLOOD PLASMA; MEASUREMENT METHODS; URINE; NEW YORK; UMBILICAL CORD	O'Brien, J.E. Abbey, V. Minsvark, O. Perel, J. Finster, M. 1979

Benzophenone, 4,4'-dichloro- (8 CI)
Methanone, bis(4-chlorophenyl)- (9 CI)
90-98-2
C13-H8-Cl2-O
BP 251.13, EP 147-148 C, SP 353 C at 757 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1784 Adipose		GC-EC	3	a) 0.39-0.63 ug/g wet wt b) 0.54-1.17 ug/g wet wt c) 0.49-0.77 ug/g wet wt	a) 0.52 ug/g wet wt b) 0.79 ug/g wet wt c) 0.57 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Human adipose tissue collected during autopsies on accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; ENTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Ren, J. Campbell, D.S. 1976

Beryllium
7440-41-7
Be
Atw 9.01218, MP 1287 C, BP 2500 C, VP 1 mm Hg at 1520 C, 10 mm Hg at 1860 C

TISSUE	REPOSITORY BOOTH	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1785 Lung		ES	30	Not detectable-7.6 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; FABRIC; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.B. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967
1786 Lung		ES	20	Not given	0.2 ug/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
1787 Lung		ES	129	0.18-0.38 ug/g dry wt	0.22 ug/g dry wt	Sections of lungs from deceased coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
1788 Lung		ES	134	0.18-0.38 ug/g dry wt	0.22 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Liatiaca, L.P. Morris, W.B. Holtz, J.L. Hauer, D. Wolowicz, F.B. 1971

Biphenyl, chloro (9 CI)
1,1'-Biphenyl, chloro derive (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1789 Adipose		GC GC	168	0.106-6.603 ug/g	0.907 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDT; DDD; HCBACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Nan, J. Campbell, D.S. Robinson, E.H. Davies, D.J.A. 1977
1790 Adipose		GC-EC	3	a) 0.83-1.40 ug/g wet wt b) 0.36-0.86 ug/g wet wt c) 0.51-0.65 ug/g wet wt	a) 1.16 ug/g wet wt b) 0.61 ug/g wet wt c) 0.54 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Tissue collected during autopsies on accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; PHTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Nan, J. Campbell, D.S. 1976
1791 Adipose		GC-EC	a) 26 b) 68 c) 88 d) 39 e) 122 f) 99 g) 359 h) 70	a) <0.5 ppm b) <0.5 ppm c) 0.6-9.9 ppm d) <0.5 ppm e) 0.6-9.9 ppm f) 0.6-1.5 ppm g) 0.6-1.4 ppm h) 0.9-9.9 ppm	a) <0.5 ppm b) <0.5 ppm c) 1.7 ppm d) <0.5 ppm e) 2.3 ppm f) 0.9 ppm g) 0.9 ppm h) 2.9 ppm	a) 1969 b) 1970 c) 1971 d) 1972 e) 1969-72 (females) f) 1969-72 (males) g) 1969-72 (Mexican-American) h) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
1792 Adipose		GC	78	1.0-89 mg/kg extractable fat	5.1 mg/kg extractable fat	Abdominal tissue Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects > 20 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Fraul, I. Harlog, O. 1976

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Diphenyl, chloro (9 CI)
1,1'-Diphenyl, chloro deriv (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1793 Adipose		GC	73	a) Not given b) Not given	a) 1.97 ppm b) 2.80 ppm	a) Wet tissue b) Fat Data available for age and sex groups. Autopsies of subjects < or = 82 yr, from Pori and Jyvaskyla, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Raatta, K. Arstila, A.U. 1976
1794a Adipose		GC GC/MS GC	a) 3 b) 2	a) 1.2-1.4 ppm b) 0.60-1.0 ppm	a) 1.3 ppm (whole tissue) b) 0.7 ppm (whole tissue)	a) Yusho patients b) Controls Autopsy material from 3 Yusho patients. Controls were 2 accident victims. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
1795 Adipose		GC	a) 30 b) 30 c) 14 d) 14	a) 270-1260 ppb b) 210-1350 ppb c) 270-960 ppb d) 1-380 ppb	a) 780 ppb b) 600 ppb c) 470 ppb d) 150 ppb	a) Maternal-fat only b) Maternal-total tissue c) Fetus-fat only d) Fetus-total tissue Mothers at caesarean birth at Fukuoka, Japan public hospital Dec 1973-Apr 1974. Stillborn fetuses after > 7 mo gestation. PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Masuda, Y. Kagawa, R. Furoki, H. Furatsune, M. Yoshimura, T. Taki, I. Yusuda, H. Yasushita, F. Hayashi, H. 1978
1796 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 5.8 ppm b) 3.6 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies, levels increased with age b) Danes, 1-75 yr old, sudden death by suicide or in acute accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, S.E. Clausen, J. 1979

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Biphenyl, chloro (8 Cl)
1,1'-Biphenyl, chloro deriva (9 Cl)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1797 Adrenal gland		GC	16	6-80 ppb	26 ppb	Stillborn fetuses after > 7 mo gestation PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Masuda, Y. Kagawa, R. Kuroki, H. Kuratsune, M. Yoshimura, T. Taki, I. Kusuda, M. Yamashita, F. Hayashi, M. 1978
1798 Blood	Ingestion	GC	a) 1 b) 1	a) 2.5-8.0 ppb b) 2.3-3.5 ppb	a) Not given b) Not given	a) Range from before to 3-5 hr after ingesting 181 ug PCB in fish b) Range from before to 3-5 hr after ingesting 128 ug PCB in fish levels back to pre-ingestion values by 23.5 hr. Little or no increase in PCB levels from control meals. 26 and 27 yr old Japanese eating cutlass and immature yellowtail fish. POLYCHLORINATED BIPHENYLS; FOOD CONTAMINATION; BLOOD; ADULTS; PESTICIDES; FISHES; JAPAN	Kuwabara, K. Yakushiji, T. Watanabe, I. Yoshida, S. Koyama, K. Kunita, N. 1979a
1799 Blood		GC	a) 17 b) 16	a) <0.2-12.8 ppb b) 1.7-8.6 ppb	a) 3.8 + or - 3.6 ppb b) 2.8 + or - 0.8 ppb	a) Children, 1 mo-6 yr old b) Mothers of children Children's blood level varied with length of breast-feeding. Residents of Osaka, Japan. Mothers with no occupational exposure to PCB. POLYCHLORINATED BIPHENYLS; BLOOD; CHILDREN; FOODS; PESTICIDES; JAPAN	Kuwabara, K. Yakushiji, T. Watanabe, I. Yoshida, S. Koyama, K. Kunita, N. 1979b
1800 Blood		GC	a) 5 b) 497	a) 80-200 ppb b) Not given	a) 116 ppb b) 1 ppb	a) Samples in which PCB was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
1801 Blood			7	0.002-0.020 ppm	0.007 ppm	a) Before meals b) After meals After meals PHTHALIC ACIDS; BLOOD; FOODS; ORGANIC CHLORINE COMPOUNDS; JAPAN; POLYCHLORINATED BIPHENYLS	Tomita, I. Nakamura, Y. Yagi, T. 1977

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Biphenyl, chloro (9 CI)
1,1'-Biphenyl, chloro deriv. (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1802 Blood		GC	a) 60 b) 60 c) 35 d) 27 e) 35 f) 27	a) 0.4-5.7 ppb b) 0.2-2.5 ppb c) 0.7-3.4 ppb d) 0.5-3.1 ppb e) 0.9-3.9 ppb f) 0.7-6.2 ppb	a) 2.5 ppb b) 0.61 ppb c) 1.8 ppb d) 1.2 ppb e) 2.4 ppb f) 2.5 ppb	a) Maternal blood-Fukuoka, Japan b) Cord blood-Fukuoka, Japan c) Mothers of 2-3 mo old infants-Kurume, Japan d) Mothers of 4-12 mo old infants-Kurume, Japan e) Infants, 2-3 mo, Kurume, Japan f) Infants 4-12 mo Kurume, Japan Mothers with normal or caesarean deliveries from Fukuoka, Japan, and healthy mothers and their infants, breast fed (2-3 mo) or partly weaned (4-12 mo), from Kurume, Japan. PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Nasuda, Y. Kagawa, R. Kuroki, H. Kuratsune, M. Yoshimura, T. Taki, I. Kuseda, M. Yamashita, F. Hayashi, M. 1978
1803 Blood		GC	24	a) 0.3-7.6 ppb b) 0.3-1.6 ppb	a) 2.8 + or - 1.5 ppb b) 1.1 + or - 0.6 ppb	a) 22 mothers b) 23 umbilical cords from mothers Less difference between mothers and cords when expressed on fat basis. Blood at parturition, Tokyo University Hospital, December '973-February 1974. POLYCHLORINATED BIPHENYLS; JAPAN; BLOOD; CHLORINATED HYDROCARBONS; UMBILICAL CORD; COMPARATIVE EVALUATIONS	Akiyama, K. Ohi, G. Fujitani, K. Yagyu, H. Ogino, H. Kawana, T. 1975
1804 Blood, plasma		GC	29	Not given	0.0193 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
1805 Brain		GC	77	0.0-4.8 mg/kg extractable fat	0.76 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects > 24 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976

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Biphenyl, chloro (8 CI)
1,1'-Biphenyl, chloro deriva (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1806 Brain		GC	61	a) Not given b) Not given	a) 0.12 ppm b) 1.19 ppm	a) Wet tissue b) Fat Data available for age and sex groups. Autopsies from subjects < or = 82 yr from Pori, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Imomaki, M. Maatta, K. Arstila, A.U. 1976
1807 Kidney		GC GC/MS GC	2	0.03-0.13 ppm (whole tissue)	0.08 ppm (whole tissue)	Autopsy material from Yusho patients. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
1808 Liver		GC	77	0.94-27 mg/kg extractable fat	3.2 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects > 20 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976
1809 Liver		GC	73	a) Not given b) Not given	a) 0.15 ppm b) 2.60 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies of subjects < or = 82 yr, from Pori and Jyvaskyla, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Imomaki, M. Maatta, K. Arstila, A.U. 1976
1810 Liver		GC GC/MS GC	a) 3 b) 2	a) 0.03-0.06 ppm (whole tissue) b) 0.02-0.08 ppm (whole tissue)	a) 0.05 ppm (whole tissue) b) 0.05 ppm (whole tissue)	a) Yusho patients b) Controls Material from autopsies. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977

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Biphenyl, chloro (9 CI)
1,1'-Biphenyl, chloro deriva (9 CI)
11136-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1811 Liver		GC	16	0.3-23 ppb	7.3 ppb	Stillborn fetuses after > 7 mo gestation PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Masuda, Y. Kagawa, M. Kuroki, H. Kuratsune, M. Yoshimura, T. Taki, I. Kusuda, M. Yamashita, F. Hayashi, M. 1978
1812 Lung			1	Not given	0.01 ppm	Autopsy material from Yusho patient. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
1813 Milk		GC	29	Not given	0.0842 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-8 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
1814 Milk		GC	a) 40 b) 38 c) 19 d) 20 e) 19	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 2.4 ppm, fat basis b) 2.4 ppm, fat basis c) 3.2 ppm, fat basis d) 2.0 ppm, fat basis e) 1.8 ppm, fat basis	a) 1973 b) 1974 c) 1975 d) 1976 e) 1977 Estimated from graph Mothers in Osaka Prefecture BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; JAPAN; MILK; POLYCHLORINATED BIPHENYLS	Yakushiji, T. Watanabe, I. Kuwabara, K. Yoshida, S. Hori, S. Fukushima, S. Kashimoto, T. Koyama, K. Kunita, N. 1979
1815 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-68 ng/g	a) 8 ng/g b) 10 ng/g c) 17 ng/g d) 8 ng/g e) 15 ng/g f) 12 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g Measured as Arochlor 1260 National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979

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Biphenyl, chloro (9 CI)
1,1'-Biphenyl, chloro deriva (9 CI)
1336-36-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1816 Milk						Review REVIEW; POLYCHLORINATED BIPHENYLS; WATER POLLUTION; POPULATION EXPOSURE; AIR POLLUTION; HEALTH HAZARDS; CARCINOGEN; MILK	Boyle, R.H. Highland, J.H. 1979
1817 Milk, fat		GC	52	30-870 ppb	350 ppb	Mothers of 2-12 mo old infants Healthy mothers from Kurume, Japan and their breast fed infants (2-12 mo old). PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Masuda, Y. Kagawa, R. Kuroki, H. Kuratsune, M. Yoshimura, T. Taki, I. Kusuda, M. Yamashita, F. Hayashi, M. 1978
1818 Milk, fat		GC-EC	33	Not detectable-0.751 ppm	0.085 ppm	1977-1978 study Patients at public health offices, Alberta, 17-309 days postpartum. 28 women lived in Edmonton. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
1819 Milk, whole		GC	52	1-36 ppb	13 ppb	Mothers of 2-12 mo old infants. Expressed as total milk. Healthy mothers from Kurume, Japan and their breast fed infants (2-12 mo old). PESTICIDES; POLYCHLORINATED BIPHENYLS; BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; ADRENAL GLANDS; BLOOD; LIVER; MILK; ADULTS; INFANTS; FETUS; JAPAN	Masuda, Y. Kagawa, R. Kuroki, H. Kuratsune, M. Yoshimura, T. Taki, I. Kusuda, M. Yamashita, F. Hayashi, M. 1978
1820 Spleen		CC GC/MS GC	2	Not applicable	0.02 ppm	Autopsy material from Yusho patients. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977

Biphenyl, 2,3,3',4,4'-pentachloro- (8 CI)
1,1'-Biphenyl, 2,3,3',4,4'-pentachloro- (9 CI)
32598-14-4
C12-H5-Cl5
MW 316

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1821 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) <0.01 ppb b) 0.05 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University. JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

Biphenyl, 2,3',4,4',5-pentachloro- (8 CI)
1,1'-Biphenyl, 2,3',4,4',5-pentachloro (9 CI)
31508-00-6
C12-H5-Cl5
BB 316

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1922 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.13 ppb b) 0.22 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University. JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

Bismuth
7440-69-9
Bi
Atw 208.98, MP 271.5 C, BP 1579 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1823 Blood		AAS	a) 1 b) 1 c) 1	a) Not applicable b) Not applicable c) Not applicable	a) 690 ug/l b) 900 ug/l c) 92 ug/l	a) Male, 15 days after cessation of 1 mo of Bi subnitrate medication b) Female, aged 39 yr c) Serum of 54-yr-old female who occasionally used Bi for intestinal distress Male, aged 29 yr, 2 females, aged 39 and 54 yr. All had acute Bi encephalopathy. Cramps, hallucinations (visual, auditory, and taste), irregular myclonic twitches in the limbs, disturbed speech, ataxia, insomnia, space-time disorientation. Irregular EEG with no cramp potentials, and complete insomnia on the sleep-polygraph. BISMUTH; MERCURY; METALS; METAL POISONING; URINE; BLOOD; SPINAL FLUID; GERMANY; NEUROLOGIC MANIFESTATIONS	Cramer, H. Renaud, B. Billiard, M. Mouret, J. Hamaers, R. 1978
1824 Blood						Review METALS; TRACE ELEMENTS; BISMUTH; BICOD; URINE; METABOLISM; REVIEW	Serfontein, W.J. Mekel, R. 1979
1825 Blood, whole	Ingestion	ASV	35	a) 1-12 ug/l b) 6-33 ug/l c) 6-30 ug/l	a) 4 ug/l b) 10 ug/l c) 12 ug/l	a) Wk 0 b) End of 3 wk therapy c) End of 6 wk therapy Each subject received 1120 mg complexed Bi/day in Bicitropeptide. Patients in double-blind clinical trial. METALS; DRUGS; DRUG THERAPY; BISMUTH; BLOOD; URINE; COMPARATIVE EVALUATIONS; SOUTH AFRICA	Serfontein, W.J. Mekel, R. Bank, S. Barberat, G. Bovis, B. 1979
1826 Urine			1	Not applicable	90 ug/l	Female, 54 yr old, who had occasionally used Bi for intestinal distress. Cramps, hallucinations (visual, auditory, and taste), irregular myclonic twitches in the limbs, disturbed speech, ataxia, insomnia, space-time disorientation. Irregular EEG with no cramp potentials, and complete insomnia on the sleep-polygraph. BISMUTH; MERCURY; METALS; METAL POISONING; URINE; BLOOD; SPINAL FLUID; GERMANY; NEUROLOGIC MANIFESTATIONS	Cramer, H. Renaud, B. Billiard, M. Mouret, J. Hamaers, R. 1978

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Bismuth
7440-69-9
Bi
Atw 208.98, HP 271.5 C, BP 1579 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1827 Urine	Ingestion	ASV	43	a) 10-23 ug/l b) 20-940 ug/l c) 31-780 ug/l	a) 18 ug/l b) 272 ug/l c) 243 ug/l	a) Wk 0 b) End of 3 wk therapy c) End of 6 wk therapy Each subject received 1120 mg complexed Bi/day in Bicitropeptide. Patients in double-blind clinical trial. METALS; DRUGS; DRUG THERAPY; BISMUTH; BLOOD; URINE; COMPARATIVE EVALUATIONS; SOUTH AFRICA	Serfontein, W.J. Hekel, H. Bank, S. Barbezat, G. Novis, B. 1979
1828 Urine						Review METALS; TRACE ELEMENTS; BISMUTH; BLOOD; URINE; METABOLISM; REVIEW	Serfontein, W.J. Hekel, H. 1979

Bleomycin
11056-06-7
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1829 Blood, plasma	Injection	RIA	15	a) 135-4 qU/ml b) 2500-6 qU/ml	a) Not given b) Not given	a) 12-144 hr after start of continuous infusion of 15 or 30 units a day for 4-5 days b) Immediately and 12 hr after 7-10 units I.V. for 10 min. Data from graph of 1 example each method Other data available. Patients with varicus neoplasms. ANTIBIOTICS; BLOOD PLASMA; DRUGS; DRUG THERAPY; IN VIVO ANALYSIS; COMPARATIVE EVALUATIONS; CHEMOTHERAPY; TEXAS	Kramer, W.G. Feldman, S. Broughton,A. Strong, J.E. Hall, S.W. Moloye, P.Y. 1978

Boron
7440-42-8
B
AtW 10.81, MP 2200 C (approx), BP 2550 C, VP 1.56X10(E-5) atm at 2140 C, 1 mm Hg at 2660 C, 10 mm Hg at 3030 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1830 Hair		ES	a) 265 b) 197	a) 0.030-22.0 ug/g b) 0.037-25.0 ug/g	a) 0.881 ug/g b) 0.981 ug/g Geometric means	a) Children b) Adults Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUS; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
1831 Kidney		ES		a) Not given b) Not given c) Not given	a) 0.94 ppm (13%) b) 1.15 ppm (34%) c) 1.45 ppm (33%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1832 Liver		ES		a) Not given b) Not given c) Not given	a) 2.31 ppm (33%) b) 3.03 ppm (55%) c) 1.83 ppm (59%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1833 Lung		ES	23	0.3-15.4 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967

(NEXT PAGE)

Boron
7440-42-8
B
Atw 10.81, MP 2200 C (approx), BP 2550 C, VP 1.56X10(E-5) atm at 2140 C, 1 mm Hg at 2660 C, 10 mm Hg at 3030 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1834 Spleen		ES		a) Not given b) Not given c) Not given	a) 2.57 ppm (52%) b) 5.01 ppm (77%) c) 2.79 ppm (83%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

Bromine
7726-95-6
Br
AtW 79.904, MP -7.25 C, BP 59.47 C, VP 1 mm Hg at -60 C, 10 mm Hg at -30 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1835 Hair		NA	11	25.6-48.0 ppm	31.9 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
1836 Urine		NA	a) 1 b) 1	a) 3.5-10.5 mg/24 hr b) 4.39-5.30 mg/24 hr	a) 5.8 mg/24 hr b) 4.84 mg/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Butanamide, N-(2,6-dimethylphenyl)-2-(ethylpropylamino)-, (+-)-
36637-19-0
C17-H28-N2-O
MW 276.42

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1937 Urine	Ingestion	GC/MS	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 0.21% b) 9.5% c) 0.45% d) 0.46% e) 8.3% f) 7.3% g) 5.0%	a) Etidocaine b) 2-Amino-2'-butyroxylidide c) 2-N-Ethylamino-2'-butyroxylidide d) 2,6-Dimethylaniline e) 4-Hydroxy-2,6-dimethylaniline f) Unidentified metabolite (estimated value) g) Unidentified metabolite (estimated value) % of 150-mg dose excreted after 48 hr. DRUGS; URINE; METABOLITES	Thomas, J. Morgan, D. Vine, J. 1976

Butanoic acid, 2,3-dihydroxy-2-(1-methylethyl)-, (2,3,5,7a-tetrahydro-1-hydroxy-1H-pyrrolizin-7-yl)methyl ester, N-oxide, (1R-(1alpha,7(2R*,3S*),7abeta))-
41708-76-3
C15-H25-N-06
MW 315.41

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1838 Blood, plasma	Injection	GC-EC	3	a) 24-2.8 ug/ml b) 73-3.2 ug/ml c) 95-7.5 ug/ml d) 350-70 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 5 min-5 hr, 450 mg/sq m b) 5 min-6 hr, 1000 mg/sq m c) 5 min-6 hr, 1500 mg/sq m d) 5 min-4 hr, 3000 mg/sq m Range of means Patients, 31-78 yr old, with advanced carcinoma. Reversible leukopenia and/or thrombocytopenia, myelosuppression, hemopoietic toxicity, mild nausea, vomiting. Mild hepatotoxicity. DRUGS; DRUG THERAPY; NEOPLASMS; ALKALOIDS; BLOOD PLASMA; URINE; CHEMOTHERAPY; CARCINOMAS	Kovach, J.S. Ames, M.M. Powis, G. Moertel, C.G. Hahn, R.G. Creagan, E.T. 1979
1839 Urine	Injection	GC-EC		125-3000 mg	Not given	24-hr urines, 750-5700 mg doses. Excretion related to dose, r=0.86 (P<0.05). Patients, 31-78 yr old, with advanced carcinoma. Reversible leukopenia and/or thrombocytopenia, myelosuppression, hemopoietic toxicity, mild nausea, vomiting. Mild hepatotoxicity. DRUGS; DRUG THERAPY; NEOPLASMS; ALKALOIDS; BLOOD PLASMA; URINE; CHEMOTHERAPY; CARCINOMAS	Kovach, J.S. Ames, M.M. Powis, G. Moertel, C.G. Hahn, R.G. Creagan, E.T. 1979

Butyric acid, 3-((2-amino-2-carboxyethyl)thio)-, stereoisomer (8 CI)
L-Cysteine, S-(2-carboxy-1-methylethyl)- (9 CI)
21861-11-0
C7-H13-N-04-S
MW 207.27

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1840 Urine	Ingestion	CC Electrophoresis	1	a) 10-20% b) 60-65%	a) Not given b) Not given	a) N-acetylated amino acid b) Free amino acid Percent of original dose (about 100 mg or 7 umol/kg) excreted after 8 hr. AMINO ACIDS; METABOLITES; URINE	Rogers, K.M. Barnsley, E.A. 1977

Butyric acid, 4-(p-(bis(2-chloroethyl)amino)phenyl)- (9 CI)
Benzenebutanoic acid, 4-(bis(2-chloroethyl)amino)- (9 CI)
305-03-3
C14-H19-Cl2-N-O2
MW 304.23, MP 64-66 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1841 Blood, plasma	Ingestion	GC/MS	1	a) 850-40 ng/ml b) 20-1450 ng/ml	a) Not applicable b) Not applicable	a) Chlorambucil, 2 and 8 hr after 0.55 mg/kg, oral. 375 ng/ml at 1.3 hr b) p-[4-N,N-bis(2-chloroethyl)]amino-phenylacetic acid, 1.3 and 3 hr after 0.55 mg/kg chlorambucil, oral. 300 ng/ml at 8 hr, final value. Estimated from graph. Patient with chronic lymphocytic leukemia. DRUGS; CHEMOTHERAPY; CHLORINE ORGANIC COMPOUNDS; MEASUREMENT METHODS; BLOOD PLASMA; LEUKEMIA; METABOLISM; METABOLITES	Chang, S.Y. Larcom, B.J. Alberts, D.S. Larsen, B. Watson, P.D. Sipes, I.G. 1980

Butyrophenone, 4-(4-(p-chlorophenyl)-4-hydroxypiperidino)-4'-fluoro- (8 CI)
1-Butanone, 4-(4-(4-chlorophenyl)-4-hydroxy-1-piperidinyl)-1-(4-fluorophenyl)- (9 CI)
52-86-8
C21-H23-Cl-F-N-O2
MW 375.86, MP 148-149.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1842 Blood, serum	Injection	RIA	7	a) 0.90-0.05 ng/ml b) 1.20-0.10 ng/ml	a) Not given b) Not given	a) Range of means 0.33 and 7 hr after 0.5 mg IV. b) Range of means 0.33 and 7 hr after 0.5 mg IM Peaks at 0.33 hr 7 healthy males, aged 22-35 yr DRUGS; DRUG THERAPY; BLOOD SERUM; CALIFORNIA; ADULTS; COMPARATIVE EVALUATIONS; HORMONES	Rubin, R.T. Hays, S.E. 1979

Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1843 Adipose	Ingestion	AAS	96	0.007-0.288 ug/g (wet)	0.040 ug/g (wet)	No increase with age. Higher in smokers than in nonsmokers. White male accident victims, Dallas, TX ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Fahren, H.B. 1979
1844 Blood	Ingestion Inhalation	AAH	a) 213 b) 216 c) 39	a) 1-6 ng/g b) 1-6 ng/g c) 1-6 ng/g	a) 4.5 ng/g b) 5.6 ng/g c) 4.5 ng/g	a) Japan, 20-55 yr old b) U.S., 18-53 yr old, smoking had no effect c) Sweden, adults, higher levels in smokers Because of differences in analytical techniques no quantitative comparisons can be made between the 3 countries. Subjects in Japan and U.S., no occupational exposure. New employees, Swedish battery factory. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1845 Blood	Dermal Inhalation		1	a) Not applicable b) Not applicable c) 7.9-8.1 ug/100 g d) 5.0-17.1 ug/100 g e) 3.2-10.9 ug/100 g f) 3.3-7.1 ug/100 g	a) 5.9 ug/100 g b) 5.6 ug/100 g c) 8.0 ug/100 g d) 11.05 ug/100 g e) 8.3 ug/100 g f) 5.22 ug/100 g	a) 1972 b) 1973 c) 1974 d) 1975 e) 1976 f) 1977 Air levels about 0.2 mg/cu m Cd dust, 0.1 mg/cu m Cd fume, 0.2 mg/cu m SeO2, 1.0 mg/cu m H2SO4 and 5.0 mg/cu m HNO3 fume. 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; ZINC; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.B. Bozian, R.C. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1846 Blood			a) 26 b) 19 c) 17 d) 58 e) 37 f) 17 g) 34 h) 38 i) 7 j) 9	a) 1.30-4.27 ppb b) 0.96-4.79 ppb c) 0.2-2.1 ppb d) 0.3-3.5 ppb e) 0.2-1.8 ppb f) 0.3-1.6 ppb g) 0.2-1.5 ppb h) 0.2-1.5 ppb i) 0.8-1.8 ppb j) 0.5-3.5 ppb	a) 2.36 ppb b) 2.16 ppb c) 0.9 ppb d) 0.8 ppb e) 0.8 ppb f) 0.68 ppb g) 0.62 ppb h) 0.66 ppb i) 0.65 ppb j) 1.17 ppb	a) 0-3 yr old hospital patients b) 4-6 yr old hospital patients c) Residents < 1 km from smelter, age 2-3 yr d) Residents 1-2 km from smelter, age 2-3 yr e) Residents > 2 km from smelter, age 2-3 yr f) Age 2-3 yr, blood Pb < 100 ppb g) Age 2-3 yr, blood Pb 101-150 ppb h) Age 2-3 yr, blood Pb 151-200 ppb i) Age 2-3 yr, blood Pb 201-250 ppb j) Age 2-3 yr, blood Pb > 250 ppb Dutch subjects aged 2 mo or older. METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SERUM; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SMELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Zielhuis, R.L. del Castilho, P. Herber, R.F.M. Wibowo, A.A.E. 1978
1847 Blood		AAS	1	Not given	7.3 ug/100 ml	Patient employed at pigment factory in Australia 11 yr. Had history of heavy smoking and drinking. Increasing dyspnea on exertion, cough, and purulent sputum, acute bronchitis, proteinuria and raised plasma creatinine and urea levels. METALS; CADMIUM; BLOOD; OCCUPATIONAL HAZARDS; METAL POISONING; AUSTRALIA; CASE HISTORIES	Meerkin, H. Clarke, H. Oliphant, R. 1976
1848 Blood	Inhalation		a) 90 b) 90 c) 25	a) Not given b) Not given c) Not given	a) 5.6 ug/100 ml b) 2.5 ug/100 ml c) 2.6 ug/100 ml	a) Controls b) Mean exposure time 7.5 yr c) Mean exposure time 27.5 yr Workers in cadmium-using and cadmium-producing factories, Belgium Cough, impairment of respiratory function, and proteinuria of mixed tubular/glomerular type. Kidney more sensitive than lung. Renal changes (tubular and glomerular dysfunction) found mainly in workers having higher than 1 mg Cd/100 ml blood and 10 mg Cd/g creatinine in urine. BELGIUM; BLOOD; CADMIUM; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; PROTEINS; METALS; URINE	Lauwerys, R.R. Roels, H.A. Buchet, J.P. Bernard, A. Stanescu, D. 1979

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Cadmium
7440-43-9
Cd
Atw 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1849 Blood	Inhalation Ingestion	AAS	11	a) Not applicable b) 9-11 ug/100 ml c) 13.3 + or - 0.38 to 14.5 + or - 0.52 ug/100 ml d) 14.1 + or - 0.90 to 22.2 + or - 1.95 ug/100 ml e) 8.9 + or - 0.89 to 18.8 + or - 1.21 ug/100 ml Ranges of means	a) 0 ug/100 ml b) 10.0 ug/100 ml c) 13.9 ug/100 ml d) 18.2 ug/100 ml e) 13.7 ug/100 ml	a) 4 new employees, start of study b) 3 new employees, day 120 of study, values estimated from graphs c) 2 employed 23 wk at start of study, observed next 11-12 wk d) 2 employed 75 and 76 wk at start of study, observed next 48 wk e) 3 employed 188-266 wk at start of study, observed next 36 wk Bloo Cd increased to 120 days then leveled. Urine Cd up during 0-15 days of exposure, more slowly 15-120 days, rapidly after 120 days Additional data on exposure levels and kidney function. Employees, 24-47 yr old, working with CdO and Cd salts. 2/4 new employees and 4/7 old employees smoked >19 cigarettes/day. Workers with longest duration of exposure showed kidney disturbances. METALS; CADMIUM; METAL POISONING; BLOOD; URINE; OCCUPATIONAL HAZARDS; INDUSTRIAL ATMOSPHERES; INDUSTRIAL HYGIENE; COMPARATIVE EVALUATIONS; BIOACCUMULATION; METABOLISM; SMOKING; BELGIUM	Lauwerys, R. Roels, H. Regniers, M. Buchet, J.P. Bernard, A. Goret, A. 1979
1850 Blood	Ingestion	AAS	a) 169 b) 168	a) 0.015-0.323 ug/100 ml b) 0.021-0.330 ug/100 ml	a) 0.0903 ug/100 ml b) 0.1075 ug/100 ml	a) Subjects from Chicago, 1974 b) Subjects from Chicago, 1976 ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Koval, M.E. Johnson, D.E. Kraemer, D.F. Pahren, H.R. 1979
1851 Blood		AAS	a) 83 b) 123	a) Not given b) Not given	a) 0.093 + or - 0.115 ug/g b) 0.076 + or - 0.109 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, P.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
1852 Blood, whole	Inhalation	AAS	7 smokers, 8 non-smokers	a) 7.3-67.2 ug/l b) 8.0-62.6 ug/l c) 4.9-10.5 ug/l d) 4.3-13.2 ug/l	a) 22.7 ug/l b) 18.0 ug/l c) 7.0 ug/l d) 6.9 ug/l	a) Smokers, before vacation, mean working time 5 yr b) Smokers, after 1 mo vacation, mean working time 5 yr c) Non-smokers, before vacation, mean working time 9 yr d) Non-smokers, after 1 mo vacation, mean working time 9 yr Battery factory workers, 28-60 yr old. CADMIUM; METALS; INDUSTRIAL ATMOSPHERES; SMOKING; BLOOD; URINE; COMPARATIVE EVALUATIONS; OCCUPATIONAL HAZARDS; SWEDEN	Adamsson, E. Piscator, M. Nogawa, K. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1853 Blood, whole	Inhalation Ingestion	AAS	35	a) 0.15-4.3 ug/100 ml b) 0.19-0.24 ug/100 ml	a) 0.93 ug/100 ml b) 0.38 ug/100 ml	a) Exposed workers, range for 9 subjects b) Unexposed workers, range for 2 subjects Levels correlated with length of employment. Workers, exposed and unexposed, in a handmade-jewelry plant. Dyspnea, chest pain, dysuria, dizziness, irritability, headache, fatigue, nasal congestion, dry mouth, polyuria, anosmia, eye irritation. METALS; CADMIUM; OCCUPATIONAL HAZARDS; HEALTH HAZARDS; METAL POISONING; BLOOD; URINE; HAIR; NEW MEXICO	Baker, E.L. Peterson, W.A. Holtz, J.L. Coleman, C. Landrigan, P.J. 1979
1854 Blood, whole	Dermal Inhalation	AAS	69	Not given	0.36 ug/dl	Lead smelter workers Mean age 42.5 yr, mean employment 11.3 yr, in California. METALS; LEAD; ARSENIC; CADMIUM; BLOOD; ADULTS; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; CALIFORNIA	Spivey, G.H. Brown, C.P. Baloh, R.W. Campion, D.S. Valentine, J.L. Massey, F.J. Browdy, B.L. Culver, B.D. 1979
1855 Blood, whole		AAS	a) 38 b) 48	a) 0.02-0.35 umoles/l b) 0.01-0.18 umoles/l	a) 0.10 umoles/l b) 0.07 umoles/l	a) Cardiovascular patients b) Normotensive controls No apparent effect of age. Patients with moderate to severe cardiac conditions and/or hypertension. Controls with no known cardiovascular symptoms. All over 30 yr old. METALS; CADMIUM; LEAD; CARDIOVASCULAR DISEASES; UNITED KINGDOM; HYPERTENSION; AGE; ADULTS; SMOKING; COMPARATIVE EVALUATIONS; BLOOD; URINE	Khera, A.K. Wibberley, D.G. Edwards, K.W. Waldron, H.A. 1980
1856 Hair	Inhalation Ingestion	AAS	a) 9 b) 1	a) 3.85-13.8 ug/g of Cd-positive sections b) Not applicable	a) 7.31 ug/g of Cd-positive sections b) 2.73 ug/g of Cd-positive sections	a) Exposed workers b) Unexposed worker Levels higher in sections farthest from scalp and in sections grown before exposure than during exposure. Workers, exposed and unexposed in handmade-jewelry plant. Dyspnea, chest pain, dysuria, dizziness, irritability, headache, fatigue, nasal congestion, dry mouth, polyuria, anosmia, eye irritation. METALS; CADMIUM; OCCUPATIONAL HAZARDS; HEALTH HAZARDS; METAL POISONING; BLOOD; URINE; HAIR; NEW MEXICO	Baker, E.L. Peterson, W.A. Holtz, J.L. Coleman, C. Landrigan, P.J. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, BP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1957 Hair		AAS	a) 179 b) 106 c) 102 d) 109	a) Not given b) Not given c) Not given d) Not given	a) 0.77 ug/g b) 1.14 ug/g c) 0.96 ug/g d) 0.62 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults Correlation between Cd and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
1958 Hair	Ingestion	AAS	a) 228 b) 189	a) 0.06-9.94 ug/g b) 0.06-14.40 ug/g	a) 1.098 ug/g b) 0.828 ug/g	a) Subjects from Chicago, 1970 b) Subjects from Chicago, 1976 ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Pahren, H.R. 1979
1959 Kidney	Ingestion Inhalation	AAS	a) 154 b) 164 c) 285	a) 1.2-82.6 ug/g wet wt b) 7.4-26.3 ug/g wet wt c) 1.3-29.0 ug/g wet wt Range of means.	a) 40.7 ug/g wet wt b) 17.6 ug/g wet wt c) 18.1 ug/g wet wt	a) Japan, 1-79 yr old b) U.S., 10-59 yr old c) Sweden, 2-89 yr old Values for cortex. Levels increase to age 40-60 then decrease. Non-occupationally exposed victims of accidental or sudden death. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1960 Kidney		AAS	91	1.0-40.3 ug/g	16.8 ug/g	Post mortem, subjects 6 months to 93 yr old, from Brisbane, Australia. METALS; CADMIUM; LEAD; KIDNEYS; URINE; OCCUPATIONAL HAZARDS; AUSTRALIA; COMPARATIVE EVALUATIONS	Miller, G.J. Wylie, M.J. McKeown, D. 1976
1961 Kidney	Ingestion	AAS	162	2.97-108.66 ug/g (wet)	20.99 ug/g (wet)	Cortex. Cd increases with age. Higher in smokers than in nonsmokers. White male accident victims, Dallas, TX ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Pahren, H.R. 1979
1962 Kidney		AAS	91	1.0-100 ug/g wet wt	24 ug/g wet wt	Cortex. Levels increase up to middle age, then decrease. Autopsies of males, aged 2 mo-88 yr, and females, aged 4 mo-98 yr, in Perth, Western Australia. METALS; CADMIUM; LIVER; KIDNEYS; AUSTRALIA; AUTOPSIES; BIOACCUMULATION	Spickett, J.T. Lazner, J. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1863 Kidney		NA		100-200 ug/g	Not given	Levels about 10 times normal Residents of Shipham, United Kingdom, location of former Zn mine. METALS; CADMIUM; KIDNEYS; INDUSTRIAL POLLUTION; INDUSTRIAL AREAS; LAND POLLUTION; MEASUREMENT METHODS; POPULATION EXPOSURE; UNITED KINGDOM	Borman, S. 1980
1864 Kidney		ES	a) 134 b) 73 c) 88	a) Not given b) Not given c) Not given	a) 92.4 ppm b) 79.1 ppm c) 75.2 ppm	a) No renal disease b) Acute renal failures C) Chronic renal failures a) and c) different, P<0.02 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1865 Liver	Ingestion Inhalation	AAS	a) 154 b) 168 c) 285	a) 0.6-6.0 ug/g wet wt b) 0.86-1.4 ug/g wet wt c) 0.16-4.53 ug/g wet wt Range of means.	a) 3.36 ug/g wet wt b) 1.20 ug/g wet wt c) 1.10 ug/g wet wt	a) Japan, 1-79 yr old b) U.S., 10-59 yr old c) Sweden, 2-89 yr old Levels increase to plateau with age. Non-occupationally exposed victims of accidental or sudden death. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1866 Liver	Inhalation		1	Not applicable	0.23 mg/100 g wet wt	Autopsy 38-yr-old man welding Cd-plated drums without precautions against fumes. Throat irritation, breathing difficulties, fever, rigors. Dyspnoeic, cyanotic, febrile, sweating, unable to walk, impaired speech, rapid pulse. Death during 3rd day. Enlargement of the heart, pulmonary edema, cardiac arrest. Enlarged and congested spleen, pale and swollen kidneys, degeneration of lung epithelium, hepatic cell necrosis. CADMIUM; AUSTRALIA; METALS; METAL POISONING; LIVER; LUNGS; AUTOPSIES	Patwardhan, J.B. Finckh, E.S. 1976

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Cadelum
7440-43-9
Cd
Atm 112.40, BP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1967 Liver	Ingestion	AAS	162	0.09-3.68 ug/g (wet)	1.23 ug/g (wet)	Cd increases with age. Higher in smokers than in nonsmokers. White male accident victims, Dallas, TX ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Fahren, H.R. 1979
1968 Liver		AAS	89	0.1-7.4 ug/g wet wt	2.1 ug/g wet wt	Levels increased with age. Autopsies of males, aged 2 mo-88 yr, and females, aged 4 mo-94 yr, in Perth, Western Australia. METALS; CADMIUM; LIVER; KIDNEYS; AUSTRALIA; AUTOPSIES; BIOACCUMULATION	Spickett, J.T. Lazner, J. 1979
1969 Liver		MS	a) 91 b) 43 c) 75	a) Not given b) Not given c) Not given	a) 14.4 ppm b) 20.0 ppm c) 14.8 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and c) different, P<0.02 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1970 Lung	Inhalation		1	Not applicable	0.15 mg/100 g wet wt	Autopsy 38-yr-old man welding Cd-plated drums without precautions against fumes. Throat irritation, breathing difficulties, fever, rigors. Dyspnoeic, cyanotic, febrile, sweating, unable to walk, impaired speech, rapid pulse. Death during 3rd day. Enlargement of the heart, pulmonary edema, cardiac arrest. Enlarged and congested spleen, pale and swollen kidneys, degeneration of lung epithelium, hepatic cell necrosis. CADMIUM; AUSTRALIA; METALS; METAL FUMES/MIST; LIVER; LUNGS; AUTOPSIES	Patwardhan, J.B. Pinckh, E.S. 1976

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1871 Muscle	Ingestion Inhalation	AAS	a) 209 b) 164 c) 61	a) 50-570 ng/g wet wt b) 30-95 ng/g wet wt c) 6-144 ng/g wet wt Range of means.	a) 293.8 ng/g wet wt b) 57.4 ng/g wet wt c) 64.6 ng/g wet wt	a) Japan, 1-79 yr old b) U.S., 10-59 yr old c) Sweden, 18-69 yr old In Japan and Sweden women usually higher levels than men. Increase with age in men. Non-occupationally exposed victims of accidental or sudden death. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1872 Muscle	Ingestion	AAS	162	0.001-0.256 ug/g (wet)	0.067 ug/g (wet)	Cd increases with age. Higher in smokers than in nonsmokers. White male accident victims, Dallas, TX ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Fahren, H.R. 1979
1873 Pancreas	Ingestion Inhalation	AAS		a) Not given b) Not given c) Not given	a) 2.2 ug/g wet wt b) 0.7 ug/g wet wt c) 0.5 ug/g wet wt Geometric means	a) Japan b) U.S. c) Sweden All 30-59 yr old Non-occupationally exposured. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1874 Pancreas	Ingestion	AAS	162	0.05-1.94 ug/g (wet)	0.58 ug/g (wet)	Cd increases with age. Higher in smokers than in nonsmokers. White male accident victims, Dallas, TX ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Fahren, H.R. 1979
1875 Placenta		AAS	135	Not given	0.102 + or - 0.077 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schalert, A. Wilson, D. Larsen, K. Dyer, W. Ramseur, H. Schaffner, W. Hoffman, L. Davies, J. 1974

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1876 Spleen		ES	a) 89 b) 36 c) 73	a) Not given b) Not given c) Not given	a) 6.58 ppm b) 12.0 ppm c) 8.38 ppm	a) No renal disease b) Acute renal failure c) Chronic renal failure a) and b) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
1877 Teeth			a) 28 b) 28	a) Not given b) Not given	a) 4.3 ppm b) 4.4 ppm	a) NE Bristol b) SW Bristol Permanent premolar teeth collected from school dental clinics in Bristol, United Kingdom. METALS; LEAD; ZINC; CADMIUM; COPPER; TEETH; CHILDREN; UNITED KINGDOM	Stack, M.V. Burkitt, A.J. Nickless, G. 1975
1878 Urine	Inhalation	AAS	a) 7 b) 8	a) 1.0-14.7 ug/g creatinine b) 0.5-9.3 ug/g creatinine	a) 5.5 ug/g creatinine b) 3.4 ug/g creatinine	a) Smokers, mean working time 5 yr b) Non-smokers, mean working time 9 yr After 1 mo vacation. Battery factory workers, 28-60 yr old. CADMIUM; METALS; INDUSTRIAL ATMOSPHERES; SMOKING; BLOOD; URINE; COMPARATIVE EVALUATIONS; OCCUPATIONAL HAZARDS; SWEDEN	Adamsson, H. Piscator, M. Nogawa, K. 1979
1879 Urine	Ingestion Inhalation	AAS	a) 607 b) 86 c) 108	a) 0.42-2.04 ug/l b) 0.33-0.80 ug/l c) 0.17-0.71 ug/l Range of means	a) 1.58 ug/l b) 0.57 ug/l c) 0.41 ug/l	a) Japan, 0-90 yr old b) U.S., 1-70 yr old c) Sweden, 0-89 yr old Japanese and Swedish women of certain age groups had higher levels than men. Smokers, higher urine values. Non-occupationally exposed. METALS; CADMIUM; FOOD CONTAMINATION; TOBACCOS; SMOKING; AGE; SEX; COMPARATIVE EVALUATIONS; LIVER; KIDNEYS; PANCREAS; URINE; BLOOD; FECES; JAPAN; UNITED STATES; TEXAS; SWEDEN	Kjellstrom, T. 1979
1880 Urine		AAS	a) 554 b) 234	a) < or = to 1 ug/l b) > 1 ug/l	a) Not given b) Not given	a) Pb levels of < 50 ug/l in 128 of 554 samples b) Pb levels of > 50 ug/l in 76 of 234 samples Approx 1:10 ratio of Cd to Pb throughout range of values. Inpatients at 7 Marion County, Indiana hospitals, and the Indiana University Medical Center, Indianapolis, Ind. CADMIUM; LEAD; URINE; METALS; INDIANA	Lewis, S.C. Forney, R.B. 1976

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Cadmium
7440-43-9
Cd
AtW 112.40, BP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1681 Urine	Inhalation Ingestion	AAS	9	Not given	>4 ug/l	9/36 random samples had detectable levels. No correlation between level and length of employment. Workers, exposed and unexposed, in a handmade-jewelry plant. Dyspnea, chest pain, dysuria, dizziness, irritability, headache, fatigue, nasal congestion, dry mouth, polyuria, anosmia, eye irritation. METALS; CADMIUM; OCCUPATIONAL HAZARDS; HEALTH HAZARDS; METAL POISONING; BLOOD; URINE; HAIR; NEW MEXICO	Baker, E.L. Peterson, M.R. Holtz, J.L. Coleman, C. Landrigan, P.J. 1979
1682 Urine	Dermal Inhalation		1	a) Not applicable b) 74.0-122.0 ug/l c) 43.0-120.0 ug/l d) Not applicable e) Not applicable	a) 5.2 ug/l b) 98.0 ug/l c) 103.0 ug/l d) 40.0 ug/l e) 77.0 ug/l	a) 1967 b) 1972 c) 1973 d) 1974 e) 1977 Air levels about 0.2 mg/cu m Cd dust, 0.1 mg/cu m Cd fume, 0.2 mg/cu m SeO2, 1.0 mg/cu m H2SO4, and 5.0 mg/cu m HNO3 fume. 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; ZINC; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.D. Bozian, R.C. 1979
1883 Urine		AAS	a) 32 b) 17	a) Not given b) Not given	a) 22.4 ug/g creatinine b) 4.9 ug/g creatinine	a) Kidney symptoms, but not bone symptoms of Itai-itai b) Urinary pH > or = 6, no excessive Cd exposure 32 Japanese observation patients, mean age 70.1 yr. 17 reference people from Toyama Prefecture, Japan, mean age 66.6 yr. CADMIUM; METALS; URINE; JAPAN; COMPARATIVE EVALUATIONS; DISEASES	Shiroishi, K. Kjellstrom, T. Kubota, K. Evrin, P.-E. Anayama, M. Vesterberg, O. Shimada, T. Piscator, M. Iwata, T. Nishino, H. 1977
1884 Urine		AAS	a) 76 b) 22	a) <0.5-8.0 ug/l b) <0.5-2.5 ug/l	a) 2.0 ug/l b) 1.1 ug/l	a) Occupational exposure b) No known exposure Adults from Brisbane, Australia. METALS; CADMIUM; LEAD; KIDNEYS; URINE; OCCUPATIONAL HAZARDS; AUSTRALIA; COMPARATIVE EVALUATIONS	Miller, G.J. Wylie, M.J. McKeown, D. 1976

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Cadmium
7440-43-9
Cd
Atw 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1885 Urine		AAS	a) 30 b) 30 c) 40 d) 40 e) 37	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 7.4 ug/l b) 4.8 ug/l c) 10.8 ug/l d) 7.0 ug/l e) 6.1 ug/l	a) Cadmium workers, Nagasaki area b) Controls, Nagasaki area c) Cadmium workers, Ishikawa area d) Controls, Ishikawa area e) Cadmium workers, Akita area 216 male workers, 50-70 yr age, from 3 polluted and 3 control areas in Japan Increased excretion of Beta(sub)2-microglobulin correlates with both age and degree of exposure. No no-effect level of cadmium for influencing Beta(sub)2-microglobulin level. AGE; CADMIUM; INDUSTRIAL POLLUTION; JAPAN; METALS; OCCUPATIONAL HAZARDS; PROTEINS; URINE	Tsuchiya, K. Iwao, S. Sugita, M. Sakurai, H. 1979
1886 Urine	Inhalation		a) 90 b) 90 c) 25	a) Not given b) Not given c) Not given	a) 1.7 ug/g creatinine b) 23.3 ug/g creatinine c) 30.7 ug/g creatinine	a) Controls b) Mean exposure time 7.5 yr c) Mean exposure time 27.5 yr Workers in cadmium-using and cadmium-producing factories, Belgium Cough, impairment of respiratory function, and proteinuria of mixed tubular/glomerular type. Kidney more sensitive than lung. Renal changes (tubular and glomerular dysfunction) found mainly in workers having higher than 1 mg Cd/100 ml blood and 10 mg Cd/g creatinine in urine. BELGIUM; BLOOD; CADMIUM; INDUSTRIAL PLANTS; OCCUPATIONAL HAZARDS; PROTEINS; METALS; URINE	Lauwerys, R.R. Roels, H.A. Buchet, J.P. Bernard, A. Stanescu, D. 1979
1887 Urine		AAS	a) 59 b) 44 c) 46 d) 20 e) 99 f) 52 g) 62 h) 66	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 6.6 ug/l b) 4.1 ug/l c) 6.8 ug/l d) 2.8 ug/l e) 9.8 ug/l f) 5.2 ug/l g) 8.2 ug/l h) 5.0 ug/l	a) Polluted areas - Akita c) Polluted areas - Gunma e) Polluted areas - Ishikawa g) Polluted areas - Nagasaki 1826 persons over 50 from general popelation of 4 Cd-polluted prefectures, 1611 from 4 control prefectures, in Japan, given systematic tests. Glucosuria, low molecular weight proteinuria, frequency of decreased tubular resorption of phosphorus, and cadmium in urine all higher in subjects from cadmium-polluted areas BIOINDICATORS; CADMIUM; GROUND WATER POLLUTION; INDUSTRIAL POLLUTION; JAPAN; LAND POLLUTION; POPULATION EXPOSURE; PROTEINS; URINE; FOOD CONTAMINATION; METALS	Shigematsu, I. Minowa, M. Yoshida, T. Miyamoto, K. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1888 Urine	Inhalation Ingestion	AAS	11	a) Not applicable b) 12-80 ug/g c) 38.4 + or - 7.0 to 41.5 + or - 8.7 ug/g d) 181 + or - 21.5 to 182 + or - 9.1 ug/g e) 109 + or - 19.4 to 370 + or - 50.2 ug/g ug/g creatinine	a) 0 ug/g b) 33 ug/g c) 38.0 ug/g d) 181.5 ug/g e) 201.7 ug/g ug/g creatinine	a) 4 new employees, start of study b) 3 new employees, day 120 of study values estimated from graphs c) 2 employed 23 wk at start of study, observed next 11-12 wk d) 2 employed 75 and 76 wk at start of study, observed next 44 wk e) 3 employeed 188-266 wk at start of study, observed next 36 wk Blood Cd increased to 120 days then leveled Urine Cd up during 0-15 days of exposure, more slowly 15-120 days, rapidly after 120 days Additional data on exposure levels and kidney function. Employees, 24-47 yr old, working with CdO and Cd salt. 2/4 new employees and 4/7 old employees smoked >19 cigarettes/day. Workers with longest duration of exposure showed kidney disturbances. METALS; CADMIUM; METAL POISONING; BLOOD; URINE; OCCUPATIONAL HAZARDS; INDUSTRIAL ATMOSPHERES; INDUSTRIAL HYGIENE; COMPARATIVE EVALUATIONS; BIOACCUMULATION; METABOLISM; SMOKING; BELGIUM	Lauwerys, R. Roels, H. Regniers, M. Buchet, J.P. Bernard, A. Goret, A. 1979
1889 Urine	Ingestion	AAS	a) 223 b) 189 c) 86	a) 0.06-5.05 ug/l b) 0.02-2.06 ug/l c) 0.11-2.14 ug/l	a) 0.767 ug/l b) 0.636 ug/l c) 0.598 ug/l	a) Subjects from Chicago, 1974 b) Subjects from Chicago, 1976 c) Subjects from Dallas, all male ADIPOSE TISSUE; BLOOD; CADMIUM; HAIR; ILLINOIS; KIDNEYS; LIVER; MUSCLES; PANCREAS; TEXAS; URINE	Kowal, N.E. Johnson, D.E. Kraemer, D.F. Fahren, H.R. 1979
1890 Urine		AAS	a) 292 b) 223	a) 0->40.0 ug/g creatinine b) 0->30.0 ug/g creatinine	a) 3.6-47.8 ug/g creatinine b) 4.0-41.1 ug/g creatinine	a) Females in 8 groups within range of medians given b) Males in 7 groups within range of medians given All inhabitants over 20 yr in 9 hamlets in heavily polluted river area in Japan. Prevalence rates of urinary total protein plus glucose, Beta(sub)2-microglobulin, retinol-binding protein, and proline all increased with increasing urinary Cd. BIOINDICATORS; CADMIUM; INDUSTRIAL POLLUTION; JAPAN; KIDNEYS; METALS; PROTEINS; URINE	Nogawa, K. Kobayashi, E. Honda, R. 1979

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Cadmium
7440-43-9
Cd
AtW 112.40, MP 321 C, BP 765 C, VP 1 mm Hg at 394 C, 10 mm Hg at 486 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1891 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 15.8 + or - 1.6 ug/day b) 14.3 + or - 0.7 ug/day c) 10.8 + or - 0.03 ug/day	a) 8 studies, 21 days each- 32 ug Cd plus 200 mg Ca/day b) 4 studies, 24 days each- 34 ug Cd plus 800 mg Ca/day c) 1 study, 18 days- 35 ug Cd plus 1500 mg Ca/day Mean + or - S.E. 1 study equivalent of 1 case Balance and other data available. 7 patients with psychoneurosis, 1 with hypercalciurea, and 1 with Paget's disease, 41-63 yr old. All in good physical condition. METALS; TRACE ELEMENTS; MINERALS; CADMIUM; COPPER; MANGANESE; ZINC; COMPARATIVE EVALUATIONS; FECES; URINE; ADULTS; DIETS; METABOLISM; ILLINOIS	Spencer, H. Asmussen, C.R. Holtzman, R.B. Kramer, L. 1979
1892 Urine		AAS	a) 38 b) 48	a) Not given b) Not given	a) 0.07 umoles/l b) 0.05 umoles/l	a) Cardiovascular patients b) Normotensive patients Levels extremely variable within patients. Patients with moderate to severe cardiac conditions and/or hypertension. Controls with no known cardiovascular symptoms. All over 30 yr old. METALS; CADMIUM; LEAD; CARDIOVASCULAR DISEASES; UNITED KINGDOM; HYPERTENSION; AGE; ADULTS; SMOKING; COMPARATIVE EVALUATIONS; BLOOD; URINE	Khera, A.K. Wibberley, D.G. Edwards, K.W. Waldron, H.A. 1980
1893 Urine		AAS	15	0.16-1.65 ng/ml	0.64 ng/ml	No apparent differences in relation to time, sex, or age. Unexposed volunteers, ages 20-54 yr. METALS; CADMIUM; LEAD; URINE; MEASUREMENT METHODS; AGE; SEX; COMPARATIVE EVALUATIONS; NEW YORK	Legotte, P.A. Rosa, W.C. Sutton, D.C. 1980

Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-O2
MW 194.19, MF 238 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1894 Blood, fetal		HPLC UV MS	99	<0.5-15 ug/l	Not given	Lower limit of detection 0.5 ug/l. Distribution heavily skewed toward lower end of range. Random samples Infants had apnea. FRANCE; CANADA; THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; ADULTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE; UMBILICAL CORD	Bory, C. Baltassat, P. Porthault, M. Bethenod, M. Frederich, A. Aranda, J.V. 1979
1895 Blood, plasma		HPLC UV MS	a) 6 b) 6 c) 6 d) 8	a) 0.1-3.7 ug/l b) 1.2-8.0 ug/l c) Not given d) Not given	a) 1.8 ug/l b) 3.5 ug/l c) <0.5 ug/l d) <0.5 ug/l	Only 6 of 28 samples exceeded detectable amounts of > or = 0.5 ug/l 7 premature infants, gestational ages 26-33 wk, treated with theophylline for apnea. 4 adults, ages 20-25 yr. FRANCE; CANADA; THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; ADULTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE; UMBILICAL CORD	Bory, C. Baltassat, P. Porthault, M. Bethenod, M. Frederich, A. Aranda, J.V. 1979
1896 Blood, plasma	Ingestion	GC	37	a) 0-8.6 ug/ml b) 0.7-8.6 ug/ml c) 0.4-0.2 ug/ml	a) 1.3 + or - 1.2 ug/ml b) 3.9 + or - 2.0 ug/ml c) Not given	a) Before treatment b) Mean peaks after 2.4-8.4 mg/kg/day for average of 103.1 hr, 25 cases c) Days 0-5, 12 controls fed human milk Higher in intoxicated infants. 37 infants with apnea, born before 37 wk gestation. Toxicity developed in 12: tachycardia (2), regurgitation or GI bleeding (9), convulsions (2) THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; FRANCE; BLOOD PLASMA; COMPARATIVE EVALUATIONS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE	Boutroy, M.J. Vert, P. Royer, R.J. Monin, P. Royer-Morrot, M.J. 1979
1897 Blood, serum	Ingestion	HPLC	13	a) 0.23-14.89 ug/ml b) 0-6.5 ug/ml c) 0-3.37 ug/ml d) 0-5.84 ug/ml	a) 5.6 + or - 4.8 ug/ml 3.6 + or - 2.1 ug/ml c) 1.0 + or - 1.0 ug/ml d) 1.0 + or - 1.4 ug/ml	a) Infants, < 30 wk gestational age, caffeine 10 mg/kg/day b) Infants, 30-33 wk gestational age, caffeine 10 mg/kg/day c) Infants, < 30 wk gestational age, theophylline 2 mg/kg/day d) Infants, 30-33 wk gestational age, theophylline 2 mg/kg/day Interconversion as much as 100%. Infants receiving methylxanthine therapy for apnea. Weight < 2,000 g when born at < 33 wks gestation. INFANTS; DRUGS; DRUG THERAPY; BLOOD SERUM; ILLINOIS; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; THEOPHYLLINES; CAFFEINE	Bada, H.S. Khanna, N.N. Somani, S.M. Tin, A.A. 1979

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Caffeine (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3,7-trimethyl- (9 CI)
58-08-2
C8-H10-N4-02
HW 194.19, HP 238 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1898 Milk		HPLC UV MS	28	<0.5-4.5 mg/l	Not given	Only 6 of 28 samples exceeded detectable amounts of > or = 0.5 mg/l. 28 random samples FRANCE; CANADA; THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; ADULTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE; UMBILICAL CORD	Bory, C. Baltassat, P. Porthault, M. Bethenod, M. Frederich, A. Aranda, J.V. 1979

Calcium
7440-70-2
Ca
atw 40.08, MP 850 C, BP 1440 C, VP 10 mm at 983 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1899 Adipose		X-ray spectros	4	Not given	60.3 ppm dry wt	Abdominal fat. 2 samples taken per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1900 Aorta		X-ray spectros	9	Not given	4866 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1901 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 8.06 mg/100 ml b) 9.02 mg/100 ml c) 8.99 mg/100 ml d) 9.53 mg/100 ml e) 10.24 mg/100 ml f) 10.26 mg/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group f) Cord blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Bogden, J.D. Thind, I.S. Kemp, F.W. Caterini, H. 1978
1902 Blood, serum			39	8.4 mg/dl - normal	Not given	Normal range 8.9-10.5 mg/dl. Hypocalcemia in 4 of 39 patients. Adult epileptic patients attending neurology outpatient clinics of Toronto General and Toronto Western Hospitals. 23 men and 16 women, mean age 45 yr (range 26-72 yr). Frequent abnormalities of calcium and bone metabolism. CALCIUM; METABOLISM; CHEMOTHERAPY; PHOSPHORUS; EPILEPSY; HYDROXYCHOLECALCIFEROLS; BLOOD SERUM; CENTRAL NERVOUS SYSTEM DISEASES; MINERALS; CANADA	Pylypchuk, G. Oreopoulos, D.G. Wilson, D.R. Harrison, J.E. McNeill, K.G. Reeds, M.E. Ogilvie, R. Stertridge, W.C. Murray, T.M. 1978

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Calcium
7440-70-2
Ca
Atw 40.08, MP 850 C, BP 1440 C, VP 10 mm at 983 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1903 Blood, serum		AAS	187	a) Not given b) Not given	a) 11.2 mg/100 ml b) 11.0 mg/100 ml	a) Men b) Women Criteria for low levels < 8.4 mg/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978
1904 Blood, serum			a) 4 b) 3	a) 9.2-10.0 mg/dl b) 4.0-6.8 mg/dl	a) 9.7 mg/dl b) 5.4 mg/dl	a) Controls b) Patients with hypoparathyroidism CALCIUM; PHOSPHORUS; METALS; METABOLITES; BLOOD SERUM; URINE; HYDROXYCHOLECALCIFEROLS; VITAMIN D; UNITED KINGDOM	Mawer, E.B. Davies, M. Backhouse, J. Hill, L.F. Taylor, C.M. 1976
1905 Blood, serum			a) 16 b) 18 c) 32	a) Not given b) Not given c) Not given	a) 9.0 mg/dl b) 9.8 mg/dl c) 10.0 mg/dl	a) Controls (vitamin D deficient) b) 3000 units of vitamin D2 in capsules weekly for 4 mo c) Vitamin-D-fortified flour for 6 mo Asians in Glasgow, 20 adults and 46 children from 14 families. Some subjects had biochemical abnormalities suggestive of rickets or osteomalacia. CALCIUM; METALS; BLOOD SERUM; VITAMIN D; ASIA; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; DIETS; COMPARATIVE EVALUATIONS; VITAMINS	Pietrek, J. Windo, J. Preece, M.A. O'Riordan, J.L.H. 1976
1906 Blood, serum	Ingestion	AAS	a) 16 b) 16 c) 9	a) 9.71-9.57 mg/dl b) 8.50-8.76 mg/dl c) 9.01-9.41 mg/dl	a) Not applicable b) Not applicable c) Not applicable	a) Control, 0 and 6 hr after 50 mg Zn b) Cirrhotics, 0 and 6 hr after 50 mg Zn c) Postsurgical group, 0 and 6 hr after 50 mg Zn All groups fasted before Zn. 16 controls, 16 patients with alcoholic cirrhosis, 9 surgical patients with delayed healing. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, R.E. 1979

(NEXT PAGE)

Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1480 C, VP 10 mm at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1907 Blood, serum	Ingestion Injection	AAS	1	a) 7.5-8.2 mg/100 ml b) 6.8-8.1 mg/100 ml c) 8.8-8.6 mg/100 ml	a) 7.85 mg/100 ml b) Not given c) Not given	a) At admission for osteoporosis b) During 1 to 10 wk of oral vitamin D2, Ca & PO4 therapy (daily doses 1000 IU, 0.3 g, 1.76 g, respectively). Progressive demineralization c) 5 to 12 mo after third Ca infusion (total 14.7 g Ca) during maintenance on oral therapy as in b). Rickets and osteoporosis absent. Teenage female with spastic quadriplegia, immobilized from infancy. IV Ca relieved symptoms of anticonvulsant-related rickets and osteoporosis. Oral Ca, vitamin D, and PO4 ineffective. IV Ca promoted remineralization of bones and reduced urine PO4. Oral Ca, vitamin D, and PO4 ineffective. CALCIUM; MINERAL METABOLISM; ANTICONVULSANTS; PENNSYLVANIA; URINE; BLOOD SERUM; DISEASES; VITAMIN D; HORMONES; DRUG THERAPY; BONE DISEASES; PHOSPHOROUS; CASE HISTORIES	Latorre, H. Kenny, F.M. 1974
1908 Blood, serum		AAS	24	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 9.9 mg/100 ml b) 10.0 mg/100 ml c) 9.4 mg/100 ml d) 9.6 mg/100 ml e) 9.3 mg/100 ml	a) 4-6 mo lactation b) 7-9 mo lactation c) 10-15 mo lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 2-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
1909 Hair		AAS	8	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 761 ppm b) 392 ppm c) 432 ppm d) 1151 ppm e) 1953 ppm	a) 1-6 mo lactation b) 7-9 mo lactation c) 10-15 mo lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
1910 Kidney		X-ray spectrom	12	a) Not given b) Not given	a) 937 ppm dry wt b) 1363 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses on each sample. 1978 autopsies of 10 pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelmon, N.F. Hill, H.W. Nielson, K.K. Watough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Calcium
7440-70-2
Ca
At# 40.08, BP 850 C, MP 1440 C, VP 10 mm at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1911 Kidney		ES	a) 134 b) 73 c) 86	a) Not given b) Not given c) Not given	a) 515 ppm b) 625 ppm c) 653 ppm	a) No renal disease b) Acute renal diseases c) Chronic renal diseases a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1912 Liver		X-ray spectros	10	Not given	199 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1913 Liver		ES	a) 91 b) 44 c) 72	a) Not given b) Not given c) Not given	a) 216 ppm b) 232 ppm c) 277 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and c) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1914 Milk		AAS	a) 28 b) 39 c) 23 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 257 + or - 29 ug/ml b) 236 + or - 25 ug/ml c) 175 + or - 28 ug/ml d) 170 + or - 25 ug/ml e) 196 + or - 30 ug/ml f) 150 + or - 38 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 mo lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr age, 22 primiparae. BLOOD SERUM; MILK; METALS; LACTATION; HAIR; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm at 982 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1915 Nail		NA	a) 50 b) 50 c) 38 d) 22	a) Not given b) Not given c) Not given d) Not given	a) 1336.2 ug/g dry wt b) 986.7 ug/g dry wt c) 946.1 ug/g dry wt d) 847.9 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schamschula, R.G. 1976
1916 Pancreas		X-ray spectros	4	Not given	377 ppm dry wt	2 samples per case. 2 analyses on each sample. Samples from 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1917 Spleen		X-ray spectros	8	Not given	320 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1918 Spleen		ES	a) 91 b) 40 c) 78	a) Not given b) Not given c) Not given	a) 250 ppm b) 320 ppm c) 289 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different, P<0.05 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Calcium
7440-70-2
Ca
AtW 40.08, MP 850 C, BP 1440 C, VP 10 mm at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1919 Teeth		Radiometry	291 teeth	a) Not given b) Not given c) Not given	a) 36.7% of ash b) 39.0% of ash c) 38.7% of ash	a) Deciduous b) 22-28 yr c) >34 yr Pooled samples, average 7 teeth per sample. Other data available. Teeth from people living in Lower Silesia in southwestern Poland. STRONTIUM; CALCIUM; CESIUM; POTASSIUM; RADIOISOTOPES; METALS; TEETH; POLAND	Glowiak, B.J. Pacyna, J. Palczynski, R.J. 1977
1920 Urine		AAS	a) 8 b) 3	a) 55-707 mg/day b) 188-548 mg/day	a) 360 mg/day b) 358 mg/day	a) Controls, 32-36 wk pregnant, identical diets b) 32-36 wk pregnant, 1 g/day extra calcium 7 primaparas, aged 16-19 yr CALCIUM; MAGNESIUM; PHOSPHORUS; METALS; URINE; PREGNANCY; DIETS; AUSTRALIA; COMPARATIVE EVALUATIONS	Duggin, G.G. Lyneham, B.C. Dale, M.E. Evans, R.A. Tiller, D.J. 1974
1921 Urine	Ingestion	AAS	a) 16 b) 16	a) 4.8-2.4 mg/hr b) 3.4-3.8 mg/hr	a) Not applicable b) Not applicable	a) Control, 0 and 24 hr after 50 mg Zn b) Cirrhotic, 0 and 24 hr after 50 mg Zn All fasted before Zn. Ccatrols, patients with alcoholic cirrhosis. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, R.E. 1979
1922 Urine	Ingestion Injection	AAS	1	a) Not applicable b) Not applicable	a) 51 mg/24 hr b) 82 mg/24 hr	a) At admission for osteoporosis b) During 1 to 10 wk of oral vitamin D2, Ca and PO4 therapy (daily dose 1000 IU, 0.3 g, 1.76 g, respectively). Progressive demineralization c) 5 to 12 mo after third Ca infusion (total 147 g Ca) during maintenance on oral therapy as in b). Rickets and osteoporosis absent. Teenage female with spastic quadriplegia, immobilized from infancy. IV Ca relieved symptoms of anticonvulsant-related rickets and osteoporosis. Oral Ca, vitamin D, and PO4 ineffective. IV Ca promoted remineralization of bones and reduced urine PO4. Oral Ca, vitamin D, and PO4 ineffective. CALCIUM; MINERAL METABOLISM; ANTICONVULSANTS; PENNSYLVANIA; URINE; BLOOD SERUM; DISEASES; VITAMIN D; HORMONES; DRUG THERAPY; BONE DISEASES; PHOSPHORUS	Latorre, H. Kenny, F.M. 1974

(NEXT PAGE)

Calcium
7440-70-2
Ca
Atw 40.08, MP 850 C, BP 1440 C, VP 10 mm at 983 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1923 Urine		MA	1	180-242 mg/24 hr	178 mg/24 hr *	Healthy male, 3 samples over 2 mo METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975
1928 Urine	Ingestion	AAS	12	a) Not given b) Not given	a) 0.171 + or - 0.016 g/day b) 0.149 + or - 0.014 g/day	a) Low fiber diet plus 1.070 g Ca/day for 26 days b) High fiber diet plus 1.166 g Ca/day for 26 days Mean + or - SE Samples collected during last 7 days. Balance data available. 37-58 yr old men METALS; TRACE ELEMENTS; MINERALS; URINE; ADULTS; FECES; CALCIUM; MAGNESIUM; IRON; SILICON; COMPARATIVE EVALUATIONS; DIETS; FIBERS; METABOLISM; MARYLAND	Kelsay, J.L. Behall, K.M. Prather, E.S. 1979

Carbamic acid, methyl-, o-isopropoxyphenyl ester (8 CI)
Phenol, 2-(1-methylethoxy)-, methylcarbamate (9 CI)
114-26-1
C11-H15-N-03
MW 209.24, MP 91.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1925 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 83.8% b) 19.6%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a) Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

Carbamic acid, methyl-, 1-naphthyl ester (8 CI)
1-Naphthalenol, methylcarbamate (9 CI)
63-25-2
C12-H11-N-O2
MW 201.72, MP 145 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1926 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 7.4% b) 73.9%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974
1927 Urine		Fluorescence spectrophotometry	102	0.2-65 ppm	8.9 ppm	Plant workers exposed to carbaryl. Dermal and respiratory exposure also measured. PESTICIDES; URINE; OCCUPATIONAL HAZARDS	Comer, S.W. Staiff, D.C. Armstrong, J.F. Wolfe, H.R. 1975

Carbamic acid, methyl-, 2,6-pyridinediyldimethylene ester (8 CI)
2,6-Pyridinedimethanol, bis(methylcarbamate) (ester) (9 CI)
1882-26-4
C11-H15-N3-04
MW 253.25, MP 136-137 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1928 Blood, plasma	Ingestion	HPLC	10	9.7-19.7 ug/ml	14.5 ug/ml	Peak values after 4x250-mg tablets. Peak at 2.00 + or - 0.29 hr. Nonexponential elimination. Two formulations used did not differ. Healthy males, 25-35 yr of age, dosed 1 hr after liquid breakfast. DRUGS; FRANCE; BLOOD PLASMA; ADULTS; COMPARATIVE EVALUATIONS	Sassard, J. Bernard, M. Legheand, J. Cuisinaud, G. Traeger, J. 1979

Carbanilic acid, m-chloro-, isopropyl ester (8 CI)
Carbamic acid, (3-chlorophenyl)-, 1-methylethyl ester (9 CI)
101-21-3
C10-H12-Cl-N-O2
MW 213.65
MP 40.7-41.1 C, BP 149 C at 2 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1929 Blood		GC	a) 6 b) 497	a) 7-80 ppb b) Not given	a) 18 ppb b) < 1 ppb	Samples in which CIPC was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; EDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975

Carbonylhemoglobin
9061-29-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1930 Blood	Inhalation	UV	10	a) Not given b) Not given c) Not given	a) 6.34% b) 6.25% c) 3.80%	a) Smoking cigarettes with 22.70 mg CO per cigarette b) Smoking cigarettes with 16.97 mg CO per cigarette c) Smoking cigarettes with 7.99 mg CO per cigarette. HEMOGLOBINS; BLOOD; UNITED KINGDOM; SMOKING; CARBON INORGANIC COMPOUNDS	Turner, J.A. McN. Sillett, R.W. Ball, K.P. 1974

Cerium
7440-45-1
Ce
Atw 140.12, HP 795 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1931 Hair		NA	11	Not detectable-0.41 ppm	0.16 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977

Cesium
7440-46-2
Cs
AtW 132.9054, MP 28.5 C, BP 705 C, VP 1 mm Hg at 279 C, 10 mm Hg at 373 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1932 Hair		NA	11	Not detectable-1.18 ppm	0.38 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1933 Urine		NA	a) 1 b) 1	a) 6.7-9.9 ug/24 hr b) 10.4-12.4 ug/24 hr	a) 8.4 ug/24 hr b) 11.4 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Cesium, isotope of mass 137
10045-97-3
Cs
Atw 137, MP 28.5 C, BP 705 C, VP 1 mm Hg at 279 C, 10 mm Hg at 373 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1934 Teeth		Radiometry	291 teeth	a) Not given b) Not given c) Not given	a) 0.093 pCi/g ash b) 0.053 pCi/g ash c) 0.023 pCi/g ash	a) Deciduous b) 22-28 yr c) >38 yr Pooled samples, average 7 teeth per sample. Other data available. Teeth from people living in lower Silesia in southwestern Poland STRONTIUM; CALCIUM; CESIUM; POTASSIUM; RADIOISOTOPES; METALS; TEETH; POLAND	Glowiak, B.J. Pacyna, J. Palczynski, R.J. 1977

Chlordane
12789-03-6
C10-H6-Cl8
MW 409.8, BP 175 C at 2 mm Hg, VP 1X10(E-5) mm Hg at 25 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1935 Blood, serum		GC-EC	6	60-233 ppb	151 ppb	Males, households with one or more members in pesticide industry Household dust levels 2.15-135.70 ppm. Residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Bounce, L.M. 1974

Chlorine
7782-50-5
Cl
Atw 35.753, MP -101 C, BP -34.05 C, VP 4800 mm Hg at 20 C, 1 mm Hg at -123 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1936 Hair		NA	11	17.6-26.8 ppm	21.8 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dieaco, M. 1977
1937 Hail		NA	a) 50 b) 50 c) 36 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 585.0 ug/g dry wt b) 633.5 ug/g dry wt c) 576.8 ug/g dry wt d) 921.7 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fatern, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 30 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Mamironi, R. Koirtyohann, S.R. Pierce, J.O. Schaaschula, R.G. 1976
1938 Urine		NA	a) 1 b) 1	a) 3.81-11.1 g/24 hr b) 2.91-3.80 g/24 hr	a) 6.14 g/24 hr b) 3.36 g/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Cholesterol (8 CI)
Cholest-5-en-3-ol (3beta)- (9 CI)
57-88-5
C27-H46-O
MW 386.64, MP 148.5 C (anhydrous), BP 233 C at 0.5 mm Hg, 360 C at 760 mm Hg (some decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	YEAR	GENERAL INFORMATION	REFERENCE
1939 Blood, serum		Colorimetry	187	a) 200 mg/100 ml b) 200-249 mg/100 ml c) 250-299 mg/100 ml d) > or = 300 mg/100 ml	a) Not given b) Not given c) Not given d) Not given	a) 25% of men and 16% of women b) 39% of men and 38% of women c) 28% of men and 32% of women d) 37% of men and 46% of women Percentages in b) and c) estimated from graph DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978

Chromium
7440-47-3
Cr
AtW 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1940 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.84 ug/100 ml b) 0.58 ug/100 ml c) 0.51 ug/100 ml d) 0.88 ug/100 ml e) 0.68 ug/100 ml f) 0.69 ug/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group f) Cord blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity. Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Bogden, J.D. Thind, I.S. Kemp, F.W. Caterini, H. 1978
1941 Blood		AAS	20	Not given	2.9 + or - 1.7 (SE) ng/ml	Residents of pollution-free area in Japan. CHROMIUM; BIOINDICATORS; JAPAN; URINE; METALS; SEX; AGE	Moniyama, H. Yotoriyama, H. Moniyama, K. 1980
1942 Hair		NA	11	7.4-9.6 ppm	8.3 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1943 Hair		ES	a) 126 b) 90 c) 71	a) Not given b) Not given c) Not given	a) 0.52 ug/g b) 0.45 ug/g c) 0.80 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children Correlation between Cr and demt. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975

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Chromium
7440-47-3
Cr
Atm 51.996, BP 1900 C, MP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1944 Hair		AAS	a) 28 b) 28	a) 78-473 ppb b) 35-298 ppb	a) 241 ppb b) 94 ppb	a) Controls b) Adult-onset diabetics Orientals, matched for age and sex, from Bangkok, Thailand. Mean age 43 yr (29-74), mean height 62.2 inches (59-67), mean wt 132.1 lb (95-177). METALS; CHROMIUM; HAIR; THAILAND; DIABETES	Benjaneatra, N.K. Bennion, M. 1975
1945 Hair		AAS	a) 31 b) 17 c) 18 d) 19 e) 12 f) 10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 275 + or - 147 ng/g b) 293 + or - 143 ng/g c) 240 + or - 130 ng/g d) 296 + or - 242 ng/g e) 187.3 + or - 58 ng/g f) 228 + or - 102 ng/g	a) Normal children, less than 2 to greater than 7 yr. Lowest levels in 2-7 yr olds b) Underweight children, <2 to 7 yr c) Well-nourished adults, 20-35 yr d) Subjects, 65-885 yr, from institution for the aged e) Chronically disabled, 30-70 yr f) Drug addicts, 45-70 yr Subjects of various ages, health, and nutritional states from Turkey. CHROMIUM; TURKEY; HAIR; URINE; AGE; NUTRITIONAL DEFICIENCIES; CHILDREN; ADULTS; COMPARATIVE EVALUATIONS; DRUG ABUSE; METALS; DIETS; TRACE ELEMENTS	Gurson, C.T. Saner, G. Hertz, W. Wolf, W.B. Sotuca, S. 1975
1946 Hair						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
1947 Kidney		ES		a) Not given b) Not given c) Not given	a) 4.67 ppm (46%) b) 3.21 ppm (49%) c) 6.56 ppm (58%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapranit, S. Alexander, G.V. Gonick, H.C. 1974

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Chromium
7440-47-3
Cr
At# 51.996, BP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1948 Liver		ES		a) Not given b) Not given c) Not given	a) 2.17 ppm (45%) b) 3.86 ppm (41%) c) 3.82 ppm (29%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; PCPON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1949 Lung		ES	30	Not detectable-22.6 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolovich, F.P. Knott, M.J. Holtz, J.L. Gorski, C.M. 1967
1950 Lung		ES	20	Not given	8.7 ug/100 g dry	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.B. 1971
1951 Lung		AAS	a) 104 b) 15	a) 3.6-11.5 ug/g dry wt b) Not given	a) 6.5 ug/g dry wt b) 3.6 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.B. Lainhart, W.S. 1974

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Chromium
7440-47-3
Cr
AtW 51.996, BP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1840 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1952 Lung		ES	109	3.6-11.5 ug/g dry wt	6.7 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.B. Crable, J.V. Listiaca, L.P. Morris, H.B. Holtz, J.L. Baser, P. Wolovics, F.R. 1971
1953 Lymph node		ES	14	Not given	2.6 ug/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Swallwood, A.W. Carlberg, J.B. 1971
1954 Spleen		ES		a) Not given b) Not given c) Not given	a) 6.72 ppm (80%) b) 2.11 ppm (42%) c) 5.37 ppm (34%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1955 Urine		NA	a) 1 b) 1	a) 0.3-1.2 ug/24 hr b) Not applicable	a) 0.7 ug/24 hr b) 1.1 ug/24 hr	a) Healthy male, 5 samples over 4 mo b) Healthy female Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

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Chromium
7440-47-3
Cr
At# 51.996, MP 1900 C, BP 2642 C, VP 1 mm Hg at 1616 C, 10 mm Hg at 1880 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1956 Urine		AAS	a) 31 b) 17 c) 5 d) 19 e) 10 f) 5	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.52 + or - 0.89 ug/day b) 1.42 + or - 0.68 ug/day c) 3.08 + or - 1.9 ug/day d) 2.77 + or - 1.11 ug/day e) 1.40 + or - 0.92 ug/day f) 0.91 + or - 0.38 ug/day	a) Normal children, less than 2 to greater than 7 yr. Excretion increased with age b) Underweight children, <2 to 7yr c) Well-nourished adults, 20-35 yr d) Subjects, 45-85 yr, from institution for the aged e) Chronically diseased, 30-70 yr f) Drug addicts, 40-70 yr Subjects of various ages, health, and nutritional status from Turkey. CHROMIUM; TURKEY; HAIR; URINE; AGE; NUTRITIONAL DEFICIENCIES; CHILDREN; ADULTS; COMPARATIVE EVALUATIONS; DRUG ABUSE; METALS; DIETS; TRACE ELEMENTS	Gurson, C.T. Saner, G. Hertz, H. Wolf, W.R. Sokucu, S. 1975
1957 Urine		AAS	189	a) Not given b) Not given c) Not given	a) 0.48 + or - 0.41 (SE) ug/l b) 0.34 + or - 0.31 (SE) ug/l c) 0.41 + or - 0.37 (SE) ug/l	a) Males (9 subjects) b) Females (98 subjects) c) Entire group Values in 24-hr urines. Also given per g creatinine. Levels tended to be inversely related to age but differences not significant. Values in 2-hr urines not correlated with 24-hr urine levels (97 subjects). Residents, ages 10-80 yr, in 4 pollution-free areas of Japan. CHROMIUM; BIOINDICATORS; JAPAN; URINE; METALS; SEX; AGE	Hosiyama, H. Totoriyama, H. Hosiyama, K. 1980

Chrysotile (8 CI) (VAR)
Chrysotile [H4Mg3(SiO3)4] (9 CI)
12001-29-5
H10-09-Si2.3Mg
RN 282

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1958 Lung	Inhalation		a) 13 b) 7	a) Not given b) Not given	a) 130,000/g dry lung b) 160,000/g dry lung	a) Pittsburgh residents b) Asbestos workers FIBERS; ASBESTOS; LUNGS; PENNSYLVANIA; SOUTH CAROLINA; OCCUPATIONAL HAZARDS	Gross, P. Tarley, R.A. Davis, J.M.G. Cralley, L.J. 1974
1959 Lung		Microscopy	a) 1 b) 1	a) Not given b) Not given	a) 3 X 10(E+6) fibers/cu cm b) 2 X 10(E+6) fibers/cu cm	a) Female b) Male Parenchyma from 39 yr old female with 3 yr of exposure and 20 yr posterposure to chrysotile asbestos, and 68 yr old male with 13 yr exposure and 42 yr postexposure to chrysotile asbestos, France. ASBESTOS; LUNGS; SALIVA; ADULTS; FRANCE; FIBERS; IN VITRO ANALYSIS	Jaurand, M.C. Bignon, J. Sebastien, P. Goni, J. 1977
1960 Saliva		Microscopy	1	Not given	10(E+6) fibers	Sputum from 38 yr old male with 10 yr exposure and 9 yr postexposure to chrysotile asbestos, France. Units not given. ASBESTOS; LUNGS; SALIVA; ADULTS; FRANCE; FIBERS; IN VITRO ANALYSIS	Jaurand, M.C. Bignon, J. Sebastien, P. Goni, J. 1977

Coal (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1961 Lung			30	0.58-12.40%	4.92%	Percentage of 2 g ground, dried lungs. Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.B. Knott, M.J. Holtz, J.L. Gorski, C.M. 1967
1962 Lung			a) 30 b) 26 c) 23 d) 21	a) 580-12400 mg/100 g dry wt b) 430-13230 mg/100 g dry wt c) 310-12070 mg/100 g dry wt d) 520-13220 mg/100 g dry wt	a) 4980 mg/100 g dry wt b) 5397 mg/100 g dry wt c) 3488 mg/100 g dry wt d) 5644 mg/100 g dry wt	a) April and May 1965 b) March 1966 c) Dec 1966 to March 1967 d) Nov 1967 Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Swallwood, A.W. Carlberg, J.R. 1971
1963 Lung			a) 164 b) 14	a) 2.7-6.3 g/100 g dry wt b) Not given	a) 4.6 g/100 g dry wt b) 2.9 g/100 g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
1964 Lung			145	Not given	4.4 g/100 g dry wt	Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Listiaca, L.P. Morris, H.B. Holtz, J.L. Hauer, P. Wolowicz, P.B. 1971
1965 Lung			26	430-13,230 mg/100 g dry wt	5,397 mg/100 g dry wt	Miners with 21-47 yr occupational experience. Tissues from deceased West Virginia bituminous coal miners. METALS; MINERALS; BERYLLIUM; COBALT; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; COAL; LUNGS; WEST VIRGINIA; AUTOPSIES	Crable, J.V. Keenan, R.G. Kinser, R.E. Swallwood, A.W. Hauer, P.A. 1968

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Coal (No postings in CHEMLINE).

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1966 Lymph node			a) 23 b) 13	a) 150-5820 mg/100 g dry wt b) 740-7640 mg/100 g dry wt	a) 2391 mg/100 g dry wt b) 3900 mg/100 g dry wt	a) Dec 1966 to March 1967 b) Nov 1967 Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
1967 Lymph node			5	630-5,440 mg/100 g dry wt	5,397 mg/100 g dry wt	Values for miners with 21-47 yr occupational experience. Tissues from deceased West Virginia bituminous coal miners. METALS; MINERALS; BERYLLIUM; COBALT; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; COAL; LUNGS; WEST VIRGINIA; AUTOPSIES	Crable, J.V. Keenan, R.G. Kinser, R.E. Smallwood, A.W. Mauer, P.A. 1968

Cobalt
7440-48-4
Co
AtW 58.9332, MP 1493 C, BP 3100 C, VP 1 mm Hg at 1910 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1968 Blood		NA	a) 728 b) 691	a) Not given b) Not given	a) 0.004 + or - 0.004 ug/g b) 0.003 + or - 0.004 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
1969 Blood, serum		AAS	18	5.6-9.8 ng/ml	7.7 ng/ml	Healthy donors, aged 23-53 yr. Blood samples provided by Umberto I Regional Hospital, Ancona, Italy. METALS; MANGANESE; COBALT; COPPER; BLOOD; BLOOD SERUM; ITALY	Muzzarelli, R.A.A. Rocchetti, R. 1975
1970 Hair		NA	11	0.53-2.83 ppm	1.70 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
1971 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.12 ppm (11%) b) 1.03 ppm (13%) c) 1.55 ppm (15%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrepramit, S. Alexander, G.V. Gonick, H.C. 1974

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Cobalt
7440-48-4
Co
Atw 58.9332, MP 1493 C, BP 3100 C, VP 1 mm Hg at 1910 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1972 Liver		ES		a) Not given b) Not given c) Not given	a) 1.06 ppm (11%) b) 1.17 ppm (14%) c) 0.97 ppm (19%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
1973 Lung		ES	26	Not given	1.9 mg/100 g dry wt	Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
1974 Placenta		NA	838	Not given	0.023 + or - 0.015 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
1975 Spleen		ES		a) Not given b) Not given c) Not given	a) 1.08 ppm (10%) b) 0.97 ppm (9%) c) 1.02 ppm (9%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Cobalt
7440-48-4
Co
AtW 58.9332, MP 1493 C, BP 3100 C, VP 1 mm Hg at 1910 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1976 Urine		NA	a) 1 b) 1	a) 0.5-2.2 ug/24 hr b) 0.6-0.9 ug/24 hr	a) 1.0 ug/24 hr b) 0.8 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Copper
7440-50-8
Cu
Atw 63.546, BP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1977 Adipose		X-ray spectros	4	Not given	0.52 ppm dry wt	Abdominal fat. 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1978 Amniotic fluid		AAS	127	0.06-0.26 ppm	0.14 ppm	Levels did not change appreciably during pregnancy, nor were they significantly different between high risk and normal groups. 147 women with high risk or normal pregnancies. METALS; COPPER; AMNIOTIC FLUID; BLOOD SERUM; PREGNANCY	Shearer, T.R. Lin, E.W. Johnson, K.S. Johnson, J.R. Prescott, G.H. 1979
1979 Amniotic fluid						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
1980 Aorta		X-ray spectros	9	Not given	5.88 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
1981 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 229 ug/100 ml b) 199 ug/100 ml c) 206 ug/100 ml d) 51 ug/100 ml e) 51 ug/100 ml f) 52 ug/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group f) Cord blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking, habits, parity. Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Bogden, J.D. Thind, I.S. Kemp, F.W. Caterini, H. 1978

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1982 Blood						Review METALS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; METALLOPROTEINS; RHEUMATOID ARTHRITIS; REVIEW	Sorenson, J.R.J. 1978
1983 Blood		AAS	a) 29 b) 19	a) 0.71-1.31 ppm b) 0.87-1.81 ppm	a) 1.03 ppm b) 1.14 ppm	a) 0-3 yr old hospital patients b) 4-6 yr old hospital patients Dutch subjects aged 2 mo or older. METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SERUM; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SMELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Zielhuis, R.L. del Castilho, P. Herber, R.F.M. Wibowo, A.A.E. 1978
1984 Blood, cells						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
1985 Blood, plasma		AAS	185	0.90-1.36 Range of means	1.14 ppm	Additional data available. Healthy adults not fasting, aged 19 to 51 yr, from Sweden. METALS; ZINC; COPPER; BLOOD; BLOOD PLASMA; SALIVA; DENMARK; SEX; ADULTS	Mathur, A. Wallenius, K. Abdulla, M. 1977
1986 Blood, plasma		AAS	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 8 ug/100 ml b) 29 ug/100 ml c) 46 ug/100 ml d) 87 ug/100 ml	a) Patient 1, after 9 mo of diarrhea and 6 wk of parenteral alimentation, before Zn therapy b) Patient 1, after oral Zn, 35 mg/day, 10 days c) Patient 2, after 6 mo of diarrhea and 5 wk of parenteral alimentation, before Zn therapy. d) Patient 2, after oral Zn, 35 mg/ day, 10 days Infants treated for intractable diarrhea. 22-25 days after start of treatment patients became feverish. Rash of erythema, vesicles, denuded patches, and pustules developed around natural orifices, genitalia, perineum, fingers, and toes. Alopecia, blepharitis, and paronychia. Rash and fever responded to oral zinc. Striking decrease in serum alkaline phosphatase. Reponded to oral zinc. ZINC; BLOOD PLASMA; COPPER; SKIN DISEASES; METALS	Arakawa, T. Tamura, T. Igarashi, Y. Suzuki, H. Sandstead, H.H. 1976
1987 Blood, plasma		AAS	a) 20 b) 33	a) 78-150 ug/100 ml b) 75-166 ug/100 ml	a) 110.0 ug/100 ml b) 114.0 ug/100 ml	a) Males, 65-94 yr old, without vitamin supplement b) Females, 65-95 yr old, without vitamin supplement AGE; BLOOD; HAIR; IRELAND; METALS; TRACE ELEMENTS; VITAMINS	Vir, S.C. Love, A.H.G. 1979

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Copper
7440-50-0
Cu
Aew 63.546, BP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1988 Blood, plasma						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
1989 Blood, plasma		AAS	a) 6 b) 12 c) 16 d) 20 e) 9 f) 9 g) 24 h) 21	a) 0.78-1.65 ug/ml b) 0.70-2.22 ug/ml c) 0.83-1.91 ug/ml d) 0.76-1.97 ug/ml e) 0.95-1.78 ug/ml f) 0.70-1.53 ug/ml g) 0.71-1.18 ug/ml h) 0.64-1.46 ug/ml	a) 1.303 ug/ml b) 1.382 ug/ml c) 1.307 ug/ml d) 1.303 ug/ml e) 1.379 ug/ml f) 1.101 ug/ml g) 0.891 ug/ml h) 0.994 ug/ml	a) 5-<10 yr old males b) 5-<10 yr old females c) 10-<15 yr old males d) 10-<15 yr old females e) 60+ yr old males f) 60+ yr old females g) Caucasians old 11-17 yr males h) Caucasians, 11-17 yr old females Aborigines, 5-77 yr old, from Bowanjus and Fitzroy Crossing communities of N.W. Australia. Middle-class Caucasian children as controls. BLOOD SERUM; BLOOD PLASMA; ZINC; COPPER; IRON; METALS; AUSTRALIA; DIETS; AGE; CHILDREN; ADULTS	Holt, A.B. Spargo, R.M. Ivanac, J.D. Faulkner, G.H. Cheek, D.B. 1980
1990 Blood, serum		AAS	a) 5 b) 5	a) Not given b) Not given	a) 134 ug/dl b) 83 ug/dl	a) Women taking a combination oral contraceptive, after 35 days on diet b) Women not taking a contraceptive, after 35 days on diet Diet contained no Zn, Cu, Fe, but was otherwise nutritionally adequate. Some subjects: diarrhea, sore throat, stomatitis aphthous. ZINC; COPPER; METALS; NITROGEN; BLOOD SERUM; ORAL CONTRACEPTIVES; PROTEINS; METABOLISM	Hess, F.N. King, J.C. Margen, S. 1977a
1991 Blood, serum		AAS	35	a) Not given b) Not given c) Not given d) Not given	a) 672 ug/l b) 604 ug/l c) 926 ug/l d) 1337 ug/l	a) Day 1 b) Day 2 c) Day 10 d) Day 20 35 burn cases, 15-61 yr. Average of 34% of body surface burnt. ZINC; COPPER; BLOOD SERUM	LaParque, P. Couture, J.C. Monteil, H. Guilbaud, J. Sallou, L. 1976
1992 Blood, serum		AAS	119	0.9-3.0 ppm	2.02 ppm	Levels did not change appreciably during pregnancy, nor were they significantly different between high risk and normal groups. 107 women with high risk or normal pregnancies. METALS; COPPER; AMNIOTIC FLUID; BLOOD SERUM; PREGNANCY	Shearer, T.R. Lin, E.W. Johnson, K.S. Johnson, J.R. Prescott, G.H. 1979

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1993 Blood, serum		AAS	187	a) Not given b) Not given	a) 110 ug/100 ml b) 124 ug/100 ml	a) Men b) Women Criteria for low levels < 75 ug/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.S. Mahoney, A.W. 1978
1994 Blood, serum	Ingestion	AAS	61	a) 91-98 ug/dl b) 105-110 ug/dl c) 180-186 ug/dl	a) Not applicable b) Not applicable c) Not applicable	a) Control, 2 and 6 hr after 50 mg Zn. Fasting value, 96 ug/dl b) Cirrhotic, 0 and 2 hr after 50 mg Zn. Final value, 108 ug/dl at 6 hr c) Postsurgical group, 0 and 2 hr after 50 mg Zn. Final value, 185 ug/dl at 6 hr All groups fasted before Zn. Controls, patients with alcoholic cirrhosis, postsurgical patients with delayed healing. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, H.E. 1979
1995 Blood, serum	Ingestion	AAS	1	a) Not given b) Not given c) Not given d) Not given	a) 201 ug/dl b) 136 ug/dl c) 214 ug/dl d) 190 ug/dl	a) 16 hr after ingestion b) Ceruloplasm-bound fraction 16 hr after ingestion c) 40 hr after ingestion d) Ceruloplasm-bound fraction 40 hr after ingestion 2 yr old patient admitted to hospital 1 hr after drinking 30 ml supersaturated copper sulfate solution Peritoneal dialysis started 17 hr after ingestion. Hemolytic anemia, renal failure, cardiac arrhythmia, central nervous system depression METALS; COPPER; METAL POISONING; BLOOD SERUM; ANEMIA; NEUROLOGIC MANIFESTATIONS; CASE HISTORIES; CHILDREN; CANADA	Cole, D.E.C. Lirenman, D.S. 1978
1996 Blood, serum		AAS	18	1.0-1.4 ug/ml	1.2 ug/ml	Healthy donors, aged 21-53 yr. Blood samples provided by Umberto I Regional Hospital, Ancona, Italy. METALS; MANGANESE; COBALT; COPPER; BLOOD; BLOOD SERUM; ITALY	Mazzarelli, E.A.A. Bocchetti, E. 1975

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Copper
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Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
1997 Blood, serum	Ingestion	AAS	8	87.5-92.4 ug/100 ml	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 2.93 (2.90-2.96) mg Cu/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hemicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS; COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.M. Kies, C. Fox, H.M. 1979
1998 Blood, serum		AAS	122	a) Not given b) Not given c) Not given	a) 114.3 + or - 13.7 ug/100 ml b) 107.0 + or - 23.7 ug/100 ml c) 103.4 + or - 19.1 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Controls c) Storage battery workers, after 24 wk treatment with zinc and vitamin C Workers, aged 28-60 yr, in battery plant 4-34 yr. 100 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBINS; URINE; DIETS; VITAMIN C	Papaioannou, R. Sohler, A. Pfeiffer, C.C. 1978
1999 Blood, serum		AAS	24	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.5 ug/ml b) 1.9 ug/ml c) 2.2 ug/ml d) 1.9 ug/ml e) 1.8 ug/ml f) 2.0 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-15 mo lactation e) 16-21 mo lactation f) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
2000 Blood, serum		AAS	a) 16 b) 9 c) 13 d) 7 e) 14 f) 15	a) 1.30-2.22 ug/ml b) 1.37-2.01 ug/ml c) 1.20-2.16 ug/ml d) 1.20-2.17 ug/ml e) 0.95-1.55 ug/ml f) 1.02-1.82 ug/ml	a) 1.655 ug/ml b) 1.690 ug/ml c) 1.492 ug/ml d) 1.630 ug/ml e) 1.273 ug/ml f) 1.394 ug/ml	a) 5-<10 yr old males b) 5-<10 yr old females c) 10-<15 yr old males d) 10-<15 yr old females e) 60+ yr old males f) 60+ yr old females Aborigines, 5-77 yr old, from Mowanjum, W.W. Australia. BLOOD SERUM; BLOOD PLASMA; ZINC; COPPER; IRON; METALS; AUSTRALIA; DIETS; AGE; CHILDREN; ADULTS	Holt, A.B. Spargo, R.M. Iveson, J.B. Faulkner, G.S. Cheek, D.B. 1980
2001 Blood, serum	Injection	AAS	19	a) 54-184 ug/dl b) 32-144 ug/dl	a) 106 + or - 11 ug/dl b) 76 + or - 7 ug/dl (SE)	a) Pre-total parenteral nutrition b) During total parenteral nutrition (5-42 days) Copper content of hyperalimentation fluid, 20-30 ug/l. Significant decrease in serum after 2 wk, P<0.02. Cancer patients, ages 12-63 yr, mean at loss of 18.9 + or - 3.2% from pre-illness weight. ZINC; COPPER; METALS; MINERAL METABOLISM; BLOOD SERUM; URINE; NEOPLASMS; DIETS	Lowry, S.F. Goodgame, J.T. Smith, J.C. Maher, M.M. Makuch, R.W. Henkin, R.I. Brennan, M.F. 1979

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Copper
7440-50-8
Cu
At# 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2002 Blood, whole		AAS	33	1.0-1.7 ug/ml	1.3 ug/ml	Healthy donors, aged 21-63 yr. Blood samples provided by Velecto I Regional Hospital, Ancona, Italy. METALS; MANGANESE; COBALT; COPPER; BLOOD; BLOOD SERUM; ITALY	Murzarelli, R.A.A. Bocchetti, R. 1975
2003 Hair		NA	11	2.5-102.0 ppm	18.2 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dieseo, N. 1977
2004 Hair		AAS	6	a) 20-680 ppm b) 23-510 ppm c) 30-410 ppm	a) Not given b) Not given c) Not given	a) 5 cm from root b) 10 cm from root c) 20 cm from root, 6 of 6 subjects Range of means from several determinations for each subject. Values from graphs. 3 females, 2 males from Vancouver, British Columbia, 1 female from Paris, France. Hair colors from blond to brown, including 1 with graying dark brown hair. COPPER; HAIR; CANADA; FRANCE; METALS	Haen, D. Pate, B.D. 1976
2005 Hair		AAS	a) 179 b) 108 c) 102 d) 109	a) Not given b) Not given c) Not given d) Not given	a) 9.92 ug/g b) 17.91 ug/g c) 13.87 ug/g d) 25.06 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults Correlation between Cu and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
2006 Hair		AAS	a) 27 b) 76 c) 7 d) 35	a) 8.7-22.2 ug/g b) 6.4-25.0 ug/g c) 8.0-30.4 ug/g d) 6.9-19.7 ug/g	a) 11.1 ug/g b) 12.3 ug/g c) 15.6 ug/g d) 12.9 ug/g	a) Males, 65-94 yr old, without vitamin supplement b) Females, 65-95 yr old, without vitamin supplement c) Males, 66-78 yr old, with multivitamin supplement d) Females, 67-93 yr old, with multivitamin supplement AGE; BLOOD; HAIR; IRELAND; METALS; TRACE ELEMENTS; VITAMINS	Yir, S.C. Love, A.H.G. 1979

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Copper
7440-50-8
Cu
Atw 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2007 Hair		AAS	8	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 18 ppm b) 37 ppm c) 24 ppm d) 85 ppm e) 31 ppm	a) 1-6 mo lactation b) 7-9 mo lactation c) 10-15 mths lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
2008 Kidney		X-ray spectros	12	a) Not given b) Not given	a) 10.1 ppm dry wt b) 10.3 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, M.F. Hill, M.W. Nielsen, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2009 Kidney		ES	a) 135 b) 73 c) 88	a) Not given b) Not given c) Not given	a) 12.6 ppm b) 9.23 ppm c) 11.4 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different, b) and c) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2010 Liver		X-ray spectros	10	Not given	38.2 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, M.F. Hill, M.W. Nielsen, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2011 Liver		ES	a) 92 b) 44 c) 76	a) Not given b) Not given c) Not given	a) 23.7 ppm b) 22.4 ppm c) 22.8 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2012 Liver						Review. Fetal tissue REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
2013 Lung		ES	30	Not detectable-78.6 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.F. Knott, N.J. Holtz, J.L. Gorski, C.H. 1967
2014 Lung		AAS	20	Not given	7.5 ug/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2015 Lung		AAS	a) 85 b) 15	a) 7.5-12.9 ug/g dry wt b) Not given	a) 9.7 ug/g dry wt b) 8.2 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2016 Lung		AAS	90	7.5-12.9 ug/g dry wt	9.6 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Listiaca, L.P. Morris, H.B. Holtz, J.L. Mauer, P. Wolovicz, P.P. 1971
2017 Lymph node		AAS	14	Not given	7.7 ug/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2018 Milk		AAS	a) 28 b) 39 c) 23 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.43 + or - 0.05 ug/ml b) 0.33 + or - 0.03 ug/ml c) 0.30 + or - 0.03 ug/ml d) 0.28 + or - 0.04 ug/ml e) 0.29 + or - 0.08 ug/ml f) 0.28 + or - 0.06 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 months lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr ago, 22 primiparae and 16 multiparae, 1-31 mo postpartum. BLOOD SERUM; MILK; METALS; LACTATION; HAIR; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kesberling, S.R. 1979
2019 Milk		AAS	a) 76 b) 77 c) 23 d) 77 e) 25	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.46 ug/ml b) 0.29 ug/ml c) 0.16 ug/ml d) 0.29 ug/ml e) 0.36 ug/ml	a) Colostrum, high and low income groups b) After lactation 1-3 months, high and low income groups c) After lactation > or = 13 months, high and low income groups d) After lactation 1-3 months, low income group e) After lactation 1-3 months, high income group Significant difference (P<0.01) between income groups at 1-3 months but not at 4-6 months. Additional data available. Women from urban and rural India. METALS; TRACE ELEMENTS; COPPER; MAGNESIUM; ZINC; MILK; COMPARATIVE EVALUATIONS; URBAN AREAS; RURAL AREAS; INDIA	Rajalakshmi, K. Srikantia, S.G. 1980
2020 Milk						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980

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Copper
7440-50-8
Cu
Atw 63.546, BP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1879 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2021 Nail		NA	a) 50 b) 50 c) 38 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 4.3 ug/g dry wt b) 4.2 ug/g dr wt c) 4.5 ug/g dry wt d) 3.8 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schamschula, R.G. 1976
2022 Pancreas		X-ray spectros	6	Not given	7.16 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2023 Spleen		X-ray spectros	8	Not given	5.22 ppm dry wt	2 per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2024 Spleen		MS	a) 5.89 b) 6.02 c) 5.51	a) Not given b) Not given c) Not given	a) 5.89 ppm b) 6.02 ppm c) 5.51 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2025 Teeth			a) 28 b) 28	a) Not given b) Not given	a) 6.6 ppm b) 6.6 ppm	a) NE Bristol b) SW Bristol Permanent premolar teeth collected from school dental clinics in Bristol, United Kingdom. METALS; LEAD; ZINC; CADMIUM; COPPER; TEETH; CHILDREN; UNITED KINGDOM	Stack, M.V. Burkitt, A.J. Nickless, G. 1975

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2026 Urine			a) 16 b) 24	a) 4-367 ug/l b) <40 ug/l	a) 33 ug/l b) Not given	a) Workers in molybdenite roasting plant b) Controls-students and research personnel About 1/2 the workers had diarrhea, joint pains, back pains, headaches, and skin or hair changes. BLOOD; COLORADO; COPPER; MOLYBDENUM; HEALTH HAZARDS; INDUSTRIAL PLANTS; URINE; METALS; TRACE ELEMENTS	Walravens, P.A. Moure-Eraso, R. Solomons, C.C. Chappell, W.R. Bentley, G. 1979
2027 Urine		NA	a) 1 b) 1	a) 11.5-18.9 ug/24 hr b) 13-26 ug/24 hr	a) 15.3 ug/24 hr b) 20 ug/24 hr	a) Healthy male, 5 samples over 4 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975
2028 Urine	Ingestion	AAS	8	0.08-0.09 mg/day	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 2.93 (2.90-2.96) mg Cu/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hemicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS; COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.M. Kies, C. Fox, H.M. 1979
2029 Urine		AAS	12	a) Not given b) Not given	a) 0.07 + or - 0.01 mg/day b) 0.06 + or - 0.01 mg/day	a) Low fiber diet b) High fiber diet Men 37 to 48 yr old. Mean daily balance +0.2 mg on low-fiber diet and -0.4 mg on high-fiber diet ADULTS; URINE; METALS; TRACE ELEMENTS; DIETS; FIBERS	Kelsay, J.L. Jacob, R.A. Prather, E.S. 1979

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Copper
7440-50-8
Cu
AtW 63.546, MP 1083 C, BP 2595 C, VP 1 mm Hg at 1628 C, 10 mm Hg at 1870 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2030 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 24 + or - 1.4 ug/day b) 25 + or - 1.5 ug/day c) 16 + or - 1.8 ug/day	a) 8 studies, 21 days each - 1032 ug Cu plus 200 mg Ca/day b) 4 studies, 24 days each - 1034 ug Cu plus 800 mg Ca/day c) 1 study, 18 days - 1040 ug Cu plus 1500 mg Ca/day Mean + or - S.E. 1 study equivalent of 1 case Balance and other data available. 7 patients with psychoneurosis, 1 with hypercalciurea, and 1 with Paget's disease, 41-63 yr old. All in good physical condition. METALS; TRACE ELEMENTS; MINERALS; CADMIUM; COPPER; MANGANESE; ZINC; COMPARATIVE EVALUATIONS; FECES; URINE; ADULTS; DIETS; METABOLISM; ILLINOIS	Spencer, H. Asmussen, C.R. Holtzman, R.B. Kramer, L. 1979
2031 Urine		AAS	22	a) Not given b) Not given	a) 4.9 + or - 1.5 ug/100 ml b) 6.0 + or - 2.6 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Storage battery workers after 24 wk treatment with zinc and vitamin C Workers, aged 28-60 yr, in battery plant 4-34 yr. 100 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBINS; URINE; DIETS; VITAMIN C	Papaioannou, R. Sohler, A. Pfeiffer, C.C. 1978
2032 Urine	Injection	AAS	9	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 102 + or - 21 ug/24 hr b) 117 + or - 24 ug/24 hr c) 94 + or - 8 ug/24 hr d) 56 + or - 15 ug/24 hr mi 60 ug/24 hr (SE)	a) Week 1 b) Week 2 c) Week 3, 6 subjects d) Week 4, 3 subjects e) Week 5, 2 subjects Daily excretion for successive wk on total parenteral nutrition with a solution containing 20-30 ug/l Cu. Cancer patients, ages 12-63 yr, mean wt loss of 18.9 + or - 3.2% from pre-illness wt. ZINC; COPPER; METALS; MINERAL METABOLISM; BLOOD SERUM; URINE; NEOPLASMS; DIETS	Lowry, S.F. Goodgame, J.T. Smith, J.C. Maher, M.M. Makuch, R.W. Henkin, R.I. Brennan, M.F. 1979

Cortisol (8 CI)
Pregn-4-ene-3,20-dione, 11,17,21-trihydroxy-, (11beta)- (9 CI)
8056-08-4
C21-H30-O5
MW 362.47, MP 217-220 C, commercial samples 212-213 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2033 Blood, plasma	Dermal	Fluorometry	a) 17 b) 15	a) 2.8-21.7 ug/100 ml b) 2.8-19.7 ug/100 ml	a) 13.34 ug/100 ml b) 13.01 ug/100 ml	a) Baseline level b) Day 7 of application of fluocinolone acetonide Mean dose of 7.5 ug/7 days (4.1-16.5 ug/7 days). Additional data available. Healthy infants, ages 1 to 30 mo, with non-infective dermatitis. DRUGS; GLUCOCORTICOIDS; CORTICOSTEROIDS; BLOOD SERUM; INFANTS; SKIN DISEASES; DERMATITIS; DRUG THERAPY; COMPARATIVE EVALUATIONS	Weston, W.L. Saas, W.H., Jr. Morris, H.G. Arthur, J.M. Blakeman, G.J. Anderson, M. 1980

Coumarin, 3-(alpha-acetonylbenzyl)-4-hydroxy- (8 CI)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)- (9 CI)
81-81-2
C19-H16-O4
RN 308.32, RN 161 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2038 Blood, serum	Ingestion	HPLC	2	a) Not applicable b) 6.0-8.8 ug/ml	a) 7.2 ug/ml b) 7.8 ug/ml	a) Without naproxen treatment b) With 375 mg naproxen 2X/day, 10 days before-7 days after 50 mg warfarin Peaks at 5-10 hr after dose. Estimated from graphs. Normal males, 8 whites, 2 blacks, ages 26-31 yr. Anticoagulant activity not affected by naproxen. DRUGS; DRUG INTERACTION; BLOOD SERUM; ADULTS; ANTICOAGULANTS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; COMPARATIVE EVALUATIONS	Slattery, J.T. Levy, G. Jain, A. McMahon, F.G. 1979

Coumarin, 3-(alpha-acetonylbenzyl)-4-hydroxy-, sodium salt (8 CI)
2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, sodium salt (9 CI)
129-06-6
C19-H16-O4.Na
MW 331.34

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2035 Blood, plasma	Ingestion	GC	7	a) Not given b) Not given	a) 1.8 ug/ml b) 0.25 ug/ml	a) Peak, 1 hr after single 15-mg dose b) 96 hr after single 15-mg dose Values estimated from graph. Healthy, male Caucasians, aged 21 to 30 yr, weight 65 to 90 kg, height 1.5 to 1.9 M. ANTICOAGULANTS; DRUGS; BLOOD; BLOOD PLASMA; MEASUREMENT METHODS	Hanna, S. Rosen, M. Eisenberger, P. Ramoro, E. Lachman, L. 1978
2036 Blood, plasma	Ingestion	HPLC Fluorometry	12	a) 4.6-7.0 ug/ml b) 2.6-3.3 ug/ml c) 2.7-4.2 ug/ml d) 1.0-1.6 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) 24 hr after 0.75 mg/kg - fluorometry b) 72 hr after 0.75 mg/kg - fluorometry c) 24 hr after 0.75 mg/kg - HPLC d) 72 hr after 0.75 mg/kg - HPLC Estimated from semi-log plots. Metabolites not detected by HPLC. Healthy males, ages 21 to 29 yr. DRUGS; METABOLITES; BLOOD PLASMA; ADULTS; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS	Vessell, E.S. Shively, C.A. 1976

Cresol (9 CI) (VAN)
Phenol, methyl- (9 CI)
1319-77-3
C7-H8-O
BP 108.10, MP 10.9-35.5 C, BP 191-203 C, VP 1 mm Hg at 38-53 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2037 Urine		GC/MS	26	a) Not given b) Not given c) Not given d) Not given	a) 29 + or - 22 mg/l b) 62 + or - 30 mg/l c) 3.5 + or - 1.5 mg/l d) 1.3 + or - 0.4 mg/l	a) p-Cresol 16 subjects, no toluene exposure b) p-Cresol, 10 workers 280 ppm toluene c) o-Cresol, 10 workers d) m-Cresol, 10 workers toluene Worker exposures to mean of 280 ppm toluene 2 wk study o- and p-Cresol not detectable in urine of unexposed Toluene in air and metabolite in urine not linearly related Urine not corrected for density, methanol also in atmosphere. METABOLISM; METABOLITES; URINE; COMPARATIVE EVALUATIONS; INDUSTRIAL ATMOSPHERES; MEASUREMENT METHODS; GERMANY	Woiwode, W. Wodarz, R. Drysch, K. Weichardt, H. 1979

Cyanide
57-12-5
C-0
80 20.02

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2038 Blood	Ingestion		1	Not given	0.30 ug/dl	Peak concentration 1 hr after voluntary ingestion of 413 mg pure HCN. 49-yr-old male organic chemist. Cardiorespiratory arrest, unrecordable blood pressure, treated as diabetic, but deliberate cyanide ingestion revealed by patient after regaining consciousness. CYANIDE; BLOOD; CASE HISTORIES; AUSTRALIA	Edwards, A.C. Thomas, I.D. 1978
2039 Blood			1	Not applicable	9.2 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; PERSONS; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
2040 Blood	Injection Rectal		1	a) Not applicable b) Not applicable	a) 116 ug/dl b) 59 ug/dl	a) Combined blood sample, on admission and 6 hr later b) 12 hr after admission Patient had undergone 9 days of laetrile treatment Cold sweats, headaches, nausea, lethargy, dyspnea, hypotension, hypothermia, tachycardia, Kussmaul respiration. Leukocytosis, thrombocytosis, metabolic acidosis, electrocardiographic abnormalities. BLOOD; DRUGS; HEART; HYPOTENSION; MEXICO	Horne, D.L. Boren, L. Findley, D.A. 1979

Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (9 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.32 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2041 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 12	a) <0.0001-0.0058 ppm b) 0.0027-0.0580 ppm c) 0.0065-0.0896 ppm d) <0.0001-0.0227 ppm e) <0.0051-0.0891 ppm f) 0.0068-0.6310 ppm	a) 0.0091 ppm b) 0.0091 ppm c) 0.0191 ppm d) 0.0103 ppm e) 0.0167 ppm f) 0.0497 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Levels are for o,p'-DDT+o,p'-DDD Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, B. 1974
2042 Adipose		GC GC	168	0.001-0.036 mg/g	0.008 mg/g	Canadians from Eastern Canada (36), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; BCHACHLOR; HEXACHLOROCYCLOHEXANE; ORTHOCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, M.M. Davies, D.J.A. 1977
2043 Blood		GC GC	57	0.11-15 ppb	3.25 ppb	1975 Yugoslavia survey, 90 samples showed no alpha-BHC. Values are for serum or plasma. 65 males and 92 females, aged 8 to 92 yr (mean age 42 yr) in Croatia. HEXACHLOROCYCLOHEXANE; DDE; DDD; DDT; PESTICIDES; BLOOD SERUM; BLOOD PLASMA; YUGOSLAVIA; CHLORINATED HYDROCARBONS	Polner, E. Krauthacker, B. Stipcevic, M. Stefanac, Z. 1977
2044 Blood		GC	a) 22 b) 497	a) 1-11 ppb b) Not given	a) 4 ppb b) < 1 ppb	a) Samples in which alpha-BHC was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 65% from white males, 20% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
2045 Milk		GC TLC	17	0.1-1.9 ppb	0.58 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Selp, H. 1976

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, alpha- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)- (9 CI)
319-84-6
C6-H6-Cl6
MW 290.83, MP 159.5-160 C, BP 288 C, VP 0.02 mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2046 Milk, fat				Not given	0.12 mg/kg	85 samples-each is average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Posival, L. Uhnak, J. Madaric, A. 1977
2047 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-0.733 ppm b) Not detectable-0.016 ppm	a) 0.187 ppm b) 0.002 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients, (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
2048 Milk, fat		GC-EC	a) 34 b) 6	a) 0-0.27 ppm b) 0-0.01 ppm	a) 0.02 ppm b) 0.003 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, R.W. D'Ercole, A.J. Cain, J.D. Arthur, R.D. 1979

Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (9 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MP 290.83, MP 314-315 C (sublimes), BP 60 C at 0.59 mm Hg, VP 0.005 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2049 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 12	a) <0.0001-0.1150 ppm b) 0.0021-1.0590 ppm c) 0.0500-2.9470 ppm d) <0.0001-0.1031 ppm e) <0.0001-0.1284 ppm f) 0.0294-1.3300 ppm	a) 0.0180 ppm b) 0.0721 ppm c) 0.5409 ppm d) 0.0248 ppm e) 0.0178 ppm f) 0.2854 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2050 Adipose		GC GC	168	0.001-1.790 ug/g	0.054 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; MONACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Ren, J. Campbell, D.S. Robinson, E.W. Davies, D.J.A. 1977
2051 Adipose		GC-EC	a) 1412 b) 898	a) < or = 26.93 ppm b) < or = 3.05 ppm	a) 0.37 ppm b) 0.21 ppm	a) FY 1970 b) FY 1974 Concentrations on lipid basis. Postmortems and biopsies throughout U.S. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; MONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; UNITED STATES	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
2052 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.8031-7.5794 ppm b) <0.0001-0.3554 ppm c) 0.0046-0.4648 ppm d) 0.0119-0.3371 ppm	a) 0.4232 ppm b) 0.0631 ppm c) 0.0815 ppm d) 0.0724 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavahorian, M. 1974

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (9 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MP 290.83, MP 314-315 C (sublimes), BP 60 C at 0.50 mm Hg, VP 0.005 mm Hg at 20 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2053 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 59 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.93 ppm b) 1.20 ppm c) 1.20 ppm d) 1.26 ppm e) 1.23 ppm f) 1.17 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
2054 Adipose			268	Not given	0.208 mg/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Ponival, L. Uhnak, J. Madaric, A. 1977
2055 Adipose			1	0.11-0.12 ppm	Not given	Concentration range 8-58 days after ingestion of 170.1 g 79% dichlofenthion. Suicide attempt by 62-yr-old male. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Hague, R. Morgade, C. Sonneborn, H.E. Vaclavek, C. 1975
2056 Blood, serum		GC-EC	a) 25 b) 11 c) 16 d) 10 e) 15 f) 7	a) 6-59 ppb b) 6-22 ppb c) 5-27 ppb d) 5-12 ppb e) 5-8 ppb f) 9-15 ppb	a) 18.7 ppb b) 9.5 ppb c) 12.4 ppb d) 8.8 ppb e) 5.9 ppb f) 13.9 ppb	a) Males, households with one or more members in pesticide industry b) Females, households with one or more members in pesticide industry c) Males, farms on which pesticides were frequently used d) Females, farms on which pesticides were frequently used e) Controls (males) f) Controls (females) Adult residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DDST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
2057 Milk			57	Trace-0.31 ppm	<0.07 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; NONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Futz, F.W. Strassman, S.C. Yobs, A.R. 1976

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (9 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MP 290.83, MP 310-315 C (sublimes), BP 60 C at 0.58 mm Hg, VP 0.005 mm Hg at 20 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2058 Milk		GC TLC	49	1.2-17.8 ppb	4.69 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, H. 1976
2059 Milk		GC	a) 23 b) 20 c) 12 d) 40 e) 38 f) 19 g) 20 h) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 6.8 ppm, fat basis b) 6.2 ppm, fat basis c) 5.0 ppm, fat basis d) 4.9 ppm, fat basis e) 3.1 ppm, fat basis f) 5.0 ppm, fat basis g) 4.9 ppm, fat basis h) 3.4 ppm, fat basis	a) 1970 b) 1971 c) 1972 d) 1973 e) 1974 f) 1975 g) 1976 h) 1977 Estimated from graph Mothers in Osaka Prefecture BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; JAPAN; MILK; POLYCHLORINATED BIPHENYLS	Yakushiji, T. Watanabe, I. Kuwabara, K. Yoshida, S. Mori, S. Fukushima, S. Kashimoto, T. Koyama, K. Kunita, N. 1979
2060 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-21 ng/g	a) 1 ng/g b) 1 ng/g c) 3 ng/g d) 2 ng/g e) 2 ng/g f) 2 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979
2061 Milk, fat				Not given	9.49 mg/kg	85 samples-each in average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Rosival, L. Uhnak, J. Madaric, A. 1977
2062 Milk, fat		GC-EC	33	0.009-0.393 ppm	0.232 ppm	1977-1978 study Patients at public health offices, Alberta, 17-309 days postpartum. 24 women lived in Edmonton. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Radin, T.W. Breithaupt, W.H. Cunningham, G.B. Brenn, G.W. 1979

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, beta- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2beta,3alpha,4beta,5alpha,6beta)- (9 CI)
319-85-7
C6-H6-Cl6
MP 290.83, MP 314-315 C (sublimes), BP 60 C at 0.50 mm Hg, VP 0.005 mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2063 Milk, fat		GC-EC	a) 34 b) 6	a) 0.08-1.69 ppm b) 0.11-0.75 ppm	a) 0.53 ppm b) 0.270 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, E.W. D'Ercole, A.J. Cain, J.D. Arthur, B.D. 1979

Cyclohexane, 1,2,3,4,5,6-hexachloro-, delta- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3alpha,4beta,5alpha,6beta)- (9 CI)
319-86-8
C6-H6-Cl6
MW 290.83, MP 141.5-142.0 C, BP 60 C at 0.34 mm Hg, VP 0.02 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2064 Adipose			268	Not given	0.011 mg/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Bosival, L. Uhnak, J. Madaric, A. 1977
2065 Milk		GC TLC	34	0.3-3.2 ppb	1.14 ppb	Milk samples, hospitals in urban Oslo. 6 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; BREAST; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976
2066 Milk, fat				Not given	0.10 mg/kg	85 samples-each is average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Bosival, L. Uhnak, J. Madaric, A. 1977

Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, BP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2067 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) <0.001-0.0777 ppm b) 0.0016-0.1090 ppm c) 0.0010-1.2876 ppm d) <0.0001-0.0400 ppm e) <0.0001-0.0616 ppm f) 0.0010-0.5799 ppm	a) 0.0130 ppm b) 0.0198 ppm c) 0.0735 ppm d) 0.0168 ppm e) 0.0145 ppm f) 0.0884 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr. Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2068 Adipose		CC GC	168	0.001-0.136 ug/g	0.007 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, R.N. Davies, D.J.A. 1977
2069 Adipose			268	Not given	0.057 mg/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Rosival, L. Uhnak, J. Madaric, A. 1977
2070 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.01 ppm b) 0 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.E. Clausen, J. 1979
2071 Blood		GC	23	0.45-15 ppb	4.09 ppb	1975 Yugoslavia survey, 124 samples showed no lindane. Values are for serum or plasma. 65 males and 82 females, aged 8 to 92 yr (mean age 42 yr) in Croatia. HEXACHLOROCYCLOHEXANE; DDE; DDD; DDT; PESTICIDES; BLOOD SERUM; BLOOD PLASMA; YUGOSLAVIA; CHLORINATED HYDROCARBONS	Reiner, E. Krauthacker, B. Stipcevic, M. Stefanac, Z. 1977

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Cycloherane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI)
Cycloherane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-C16
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2072 Blood		GC	a) 41 b) 497	a) 1-17 ppb b) Not given	a) 3 ppb b) < 1 ppb	a) Samples in which lindane was positively identified b) All Samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
2073 Blood, plasma		GC	29	Not given	0.0147 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DED; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2074 Blood, serum		GC-EC	a) 11 b) 1	a) 7-23 ppb b) Not applicable	a) 16.8 ppb b) 5.0 ppb	a) Males, households with one or more members in pesticide industry b) Females, households with one or more members in pesticide industry Household dust levels 1.58-12.72 ppm. Residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Hounce, L.M. 1974
2075 Blood, whole	Dermal	GC	20	a) 0.005-0.038 ug/ml b) 0.013-0.039 ug/ml c) 0.001-0.021 ug/ml d) 0.001-0.017 ug/ml e) 0.007-0.064 ug/ml f) 0.002-0.008 ug/ml	a) 0.013 ug/ml b) 0.028 ug/ml c) 0.006 ug/ml d) 0.007 ug/ml e) 0.028 ug/ml f) 0.005 ug/ml	a) 2 hr-12 infected children b) 6 hr-12 infected children-peak c) 48 hr-12 infected children d) 2 hr-8 noninfected children e) 6 hr-8 noninfected children-peak f) 48 hr-8 noninfected children Children ages 5-99 months infected with scabies, and controls, in Dallas, TX. PESTICIDES; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; BENZENES; BLOOD; CHILDREN; DISEASES; COMPARATIVE EVALUATIONS; TEXAS	Ginsburg, C.M. Lowry, W. Reisch, J.S. 1977

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (8 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
MW 290.85, MP gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.14 mm Hg at 40 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2076 Milk		GC	29	Not given	0.0101 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2077 Milk		GC TLC	17	1.0-35.8 ppb	10.91 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in Southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976
2078 Milk		GC	2 of 51	Not given	0.004 ppm	Random subjects of greater St. Louis, MO, metropolitan area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbruster, J. Kettelhut, L.L. Drucker, H. 1977
2079 Milk, fat				Not given	0.33 mg/kg	85 samples-each is average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Rosival, L. Uhnak, J. Madaric, A. 1977
2080 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-0.340 ppm b) Not applicable	a) 0.006 ppm b) Not detectable	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979

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Cyclohexane, 1,2,3,4,5,6-hexachloro-, gamma- (9 CI)
Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)- (9 CI)
58-89-9
C6-H6-Cl6
mp 290.85, MI gamma-isomer crystals 112.5 C, BP 323.4 C, 176.2 C at 10 mm Hg, VP 0.19 mm Hg at 60 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	SPECIAL INFORMATION	REFERENCE
2087 Milk, fat		GC-EC	a) 34 b) 6	a) 0-0.29 ppm b) 0-0.03 ppm	a) 0.01 ppm b) 0.008 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; ORTHOCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, B.W. D'Ercole, A.J. Cain, J.D. Arthur, B.D. 1976
2092 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 28.6 % b) 9.3%	a) IV dose of 5 uCi b) Topical administration of 5-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1976

Cyclobexanol, 1-ethynyl-, carbamate
126-52-3
C9-813-8-02
MW 167.20, MP 96-98 C, BP at 3 mm Hg 110-122 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2083 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1 h) 1	a) 6.46-0.05 ug/ml b) 3.80-0.11 ug/ml c) 7.76-0.18 ug/ml d) 7.38-0.17 ug/ml e) 6.82-0.53 ug/ml f) 6.67-0.31 ug/ml g) 3.86-0.08 ug/ml h) 11.78-0.25 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable h) Not applicable	a) Peak level to level at 15 hr b) Peak level to level at 15 hr c) Peak level to level at 15 hr d) Peak level to level at 15 hr e) Peak level to level at 15 hr f) Peak level to level at 15 hr g) Peak level to level at 15 hr h) Peak level to level at 15 hr Individuals received single therapeutic doses of 1 g. Healthy male volunteers BLOOD; BLOOD PLASMA; DRUGS; DRUG THERAPY	Clifford, J.N. Cookson, J.N. Wickham, P.E. 1974

Cyclopropylamine, 2-phenyl-, trans-(+-)- (8 CI)
Cyclopropanamine, 2-phenyl-, trans-(+-)- (9 CI)
155-09-9
C9-H11-N
MW 133.19, MP 164-166 C, BP 79-80 C at 1.5-1.6 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSAGE	BRAIN	ORIGINAL INFORMATION	REFERENCE
2000 Blood	Ingestion	GC	1	Not applicable	3.7 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; BARBOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CASE HISTORIES; CORRECTICOT; DRUG ABUSE	Baselt, R.C. Shanhan, E. Gross, E.R. 1977
2005 Blood, serum	Ingestion	GC-EC	2	a) 12-47 ng/ml b) 20-30 ng/ml c) 7-12 ng/ml d) 6-10 ng/ml	a) 80 ng/ml b) 20 ng/ml c) 10 ng/ml d) 8 ng/ml	a) 1 hr b) 2 hr c) 5 hr d) 20 hr Profile for times after 30 mg dose. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD SERUM; URINE; MEASUREMENT METHODS	Baselt, R.C. Stewart, C.B. Shanhan, E. 1977
2006 Brain		GC	1	Not applicable	1.8 ug/g	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; BARBOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CORRECTICOT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shanhan, E. Gross, E.R. 1977
2007 Liver		GC	1	Not applicable	7.3 ug/g	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; BARBOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CORRECTICOT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shanhan, E. Gross, E.R. 1977
2009 Urine		GC	1	Not applicable	25 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; BARBOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CORRECTICOT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shanhan, E. Gross, E.R. 1977
2009 Urine	Ingestion	GC-EC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 0.35 ug/min b) 0.70 ug/min c) 0.38 ug/min d) 0.05 ug/min	a) 1 hr b) 4 hr c) 8 hr d) 16 hr Mean excretory rate for unmetabolized drug at times after 30 mg dose. 75 kg adult subject. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD SERUM; URINE; MEASUREMENT METHODS	Baselt, R.C. Stewart, C.B. Shanhan, E. 1977

D-Glucose, 2-[[[(2-chloroethyl)nitrosoamino]carbonyl]amino]-2-deoxy- (9 CI)
18769-90-5
C9-H16-Cl-N3-O7
MW 313.73

TISSUE	ROUTE/MODE OF ADMIN	ANALYTICAL METHOD	NUMBER OF CASES	DOSE	GRAM	GENERAL INFORMATION	REFERENCE
2099 Blood, plasma	Injection	Colorimetry	a) 1 b) 1	a) 10(E-6)-8110(E-6) moles/l b) 10(E-6)-3.7810(E-6) moles/l	a) Not given b) Not given	a) 0-60 min b) 0-60 min For both patients, 120 mg/sq m IV. levels declined triexponentially. Patients with advanced metastatic cancer. Nausea and vomiting. Myelotoxicity at 120 mg/sq m or greater. Thrombocytopenia with doses greater than 120 mg/sq m DRUGS; DRUG THERAPY; BLOOD PLASMA; DISTRICT OF COLUMBIA; PLATELETS; CHEMOTHERAPY; RETICULOENDOTHELIAL SYSTEM; DISEASES; SPINAL FLUID; LYMPHOCYTES; COMPARATIVE EVALUATIONS	Roth, D. Wooley, P. Green, D. Macdonald, J. Schein, P. 1978
2091 Cerebrospinal fluid	Injection	Colorimetry	2	a) Not given b) Not given	a) None detected b) None detected	a) 20 min after IV b) 3 hr after IV Dose not specified. Limit of detection was 10(E-6) moles/l. Patients with advanced metastatic cancer. Nausea and vomiting. Myelotoxicity at 120 mg/sq m or greater. Thrombocytopenia with doses greater than 120 mg/sq m. DRUGS; DRUG THERAPY; BLOOD PLASMA; DISTRICT OF COLUMBIA; CHEMOTHERAPY; RETICULOENDOTHELIAL SYSTEM; DISEASES; SPINAL FLUID; COMPARATIVE EVALUATIONS	Roth, D. Wooley, P. Green, D. Macdonald, J. Schein, P. 1978

D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(6-amino-6-deoxy-alpha-D-glucopyranosyl-(1-N))-N(1)-(4-amino-2-hydroxy-1-oxobutyl)-2-deoxy-, (S)-
39517-28-9
C22-H43-N5-O13
MW 585.62, MP 203-204 C (monohydrate)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2092 Blood, serum	Injection	Microbiological	a) 100 b) 9	a) Not given b) Not given	a) 25.5 + or - 1.2 ug/ml b) 20.2 + or - 0.1 ug/ml	a) Mean peak, 500 mg IV b) Mean peak, 500 mg IV 95 patients, 19-85 yr, infected with amikacin-sensitive pathogens. Antibiotic effectiveness: total-95% cases, partial-3%, ineffective-12%. Renal and cranial nerve effects in 2 cases. 1 case of transient ototoxia. DRUGS; DRUG THERAPY; ADULTS; ANTIBIOTICS; NEW YORK; BLOOD SERUM; NEOPLASMS; CENTRAL NERVOUS SYSTEM DISEASES; INFECTION; AMMONIUM COMPOUNDS	Parchione, L.R. Chudzak, G.R. 1978
2092 Blood, serum	Injection	Microbiological	5	a) 12.9-16.7 ug/ml b) 10.9-12.7 ug/ml	a) 15.0 ug/ml b) 11.9 ug/ml	a) Peak after loading dose of 3.33 mg/kg IV for 1 hr, then 1 mg/kg over 3 hr b) Steady state after loading dose of 3.33 mg/kg IV for 1 hr, then 1 mg/kg over 3 hr Pharmacokinetic parameters of amikacin and kanamycin virtually identical. Healthy adults. ADULTS; ANTIBIOTICS; BLOOD; BLOOD SERUM; DRUG THERAPY	Clarke, J.T. Libke, R.D. Regamey, C. Kirby, W.M.M. 1978

D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(6-amino-6-deoxy-alpha-D-glucopyranosyl-(1-4))-2-deoxy-
59-01-8
C18-H36-N4-O11
MW 484.59

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSE	MEAN	GENERAL INFORMATION	REFERENCE
2094 Blood, plasma	Injection	Microbiological	1	a) Not applicable b) Not applicable	a) 5.0 ug/ml b) 3.9 ug/ml	a) Start of exchange transfusion, 10.5 hr after 0.23 mg/kg IM b) End of exchange transfusion 135 min from beginning to end of exchange Values estimated from graph. 2.30 kg, 6 day old who underwent exchange transfusion for hyperbilirubinemia. DRUGS; DRUG THERAPY; ANTIBIOTICS; INFANTS; NEWBORN; BLOOD PLASMA; METABOLISM; TEXAS	Yaketan, G.J. Smith, H.R. Leff, R.D. Kay, J.L. 1978
2095 Blood, serum	Injection	Microbiological	5	a) 16.2-17.2 ug/ml b) 10.9-12.7 ug/ml	a) 15.8 ug/ml b) 12.0 ug/ml	a) Peak after loading dose of 3.33 mg/kg IV for 1 hr, then 1 mg/kg over 3 hr b) Steady state after loading dose of 3.33 mg/kg IV for 1 hr, then 1 mg/kg over 3 hr Pharmacokinetic parameters of amikacin and kanamycin virtually identical. Healthy adults. ADULTS; ANTIBIOTICS; BLOOD; BLOOD SERUM; DRUG THERAPY	Clarke, J.T. Libke, R.D. Regamey, C. Kirby, W.M.M. 1978

Desmethyldoxepin (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2096 Blood, plasma		GC/MS	5	20-110 ng/ml	65 ng/ml	Patients being treated with 75-300 mg/day doxepin. Doxepin levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978

Dibenz(b,e)oxepin-delta(11(6H),gamma)-propylamine, N-methyl-, hydrochloride (8 CI)
1-Propanamine, 3-dibenz(b,e)oxepin-11(6H)-ylidene-N-methyl-, hydrochloride (9 CI)
2887-91-4
C18-H19-N-O.Cl-H
MW 301

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2097 Blood, plasma	Ingestion	GC/MS	7	4.8-14.5 ng/ml	9.7 ng/ml	Following oral dose of 75 mg doxepin hydrochloride. Peak levels 2-10 hr after administration. 7 volunteers, 26-36 yr. DRUGS; BLOOD PLASMA; METABOLITES; ANTIDEPRESSIVE AGENTS	Ziegler, V.E. Biggs, J.T. Wylie, L.T. Ronen, S.H. Hawf, D.J. Coryell, W.H. 1978

Dibenz(b,e)oxepin-delta(11(6H),gamma)-propylamine, N,N-dimethyl- (8 CI)
1-Propanamine, 3-dibenz(b,e)oxepin-11(6H)-ylidene-N,N-dimethyl- (9 CI)
1668-19-5
C19-H21-N-O
MW 279.37, BP 150-157 C at 0.03 mm Hg, 260-270 C at 0.2 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2098 Blood	Ingestion	GC	10	Not detected-14.4 ug/ml	Not given	10 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
2099 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 29.6 ng/ml b) 30.2 ng/ml c) 38.4 ng/ml d) 239.6 ng/ml	a) 100 mg daily b) 100 mg daily c) 100 mg daily d) 100 mg daily 9-10 samples each case Values are total tricyclic amines. Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978
2100 Blood, plasma		GC/MS	5	17-122 ng/ml	59 ng/ml	Patients being treated with 75-300 mg/day doxepin. Metabolite desmethyldoxepin levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978
2101 Blood, plasma	Ingestion	GC/MS	7	8.8-47.4 ng/ml	26.1 ng/ml	Following oral dose of 75 mg doxepin hydrochloride. Peak values 2-4 hr after dose. 7 volunteers, 26-36 yr. DRUGS; BLOOD PLASMA; METABOLITES; ANTIDEPRESSIVE AGENTS	Ziegler, V.E. Biggs, J.T. Wylie, L.T. Ponen, S.M. Hawf, D.J. Cornell, N.W. 1978
2102 Heart	Ingestion	GC	10	Not detected-109.0 ug/g	Not given	10 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
2103 Liver	Ingestion	GC	10	2.6-257.0 ug/g	Not given	10 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979

Dibenz(b,f)(1,4)oxazepin-8-ol, 2-chloro-11-(1-piperazinyl)-
61868-78-5
C17-H16-Cl-N3-O2
MW 329.81

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSE	MEAN	GENERAL INFORMATION	REFERENCE
2108 Blood, plasma	Injection Ingestion	GC-EC	10	a) Not given b) Not given c) Not given	a) 14.2 ng/ml b) 8.2 ng/ml c) 28.3 ng/ml	a) Day 8, mean dosage 29.5 mg, IV TH b) Day 8, mean dosage 29.5 mg, oral c) 10 wk, mean dosage 92.0 mg, oral 10 male hospitalized chronic schizophrenic patients, mean age 39.9 yr (range 22.6-50.6 yr). DRUGS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; CENTRAL NERVOUS SYSTEM DISEASES	Simpson, G.M. Cooper, T.B. Lee, J.H. Young, M.A. 1978

(dibenz(b,f)(1,4)oxazepin-8-ol, 2-chloro-11-(4-methyl-1-piperazinyl)-
6166)-77-4
C18-H19-Cl-N3-O2
MW 341.84

TISSUE	DEPOSITION ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2105 Blood, plasma	Injection Ingestion	GC-EC	10	a) Not given b) Not given c) Not given	a) 33.8 ng/ml b) 29.6 ng/ml c) 47.7 ng/ml	a) Day 8, mean 29.5 mg, IV IM b) Day 8, mean 29.5 mg, oral c) 10 wk, mean 92.0 mg, oral 10 male hospitalized chronic schizophrenic patients, mean age 39.9 yr (range 22.6-50.6 yr). DRUGS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; CENTRAL NERVOUS SYSTEM DISEASES	Simpson, G.M. Cooper, T.B. Lee, J.H. Young, M.A. 1978

Dibenz(b,f)(1,4)oxazepine, 2-chloro-11-(4-methyl-1-piperazinyl)-
1977-10-2
C18-H18-Cl-N3-O
MW 327.81, MP 109-110 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2106 Blood, plasma	Injection Ingestion	GC-EC	a) 7 b) 5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 19.9 ng/ml b) 25.2 ng/ml c) 29.0 ng/ml d) 3.2 ng/ml e) 11.0 ng/ml	a) 1 hr after 30 mg IM b) 1 hr after 30 mg oral c) Day 8, mean dosage 29.5 mg, IM d) Day 8, mean dosage 29.5 mg, oral e) 10 wk, mean dosage 92.0 mg, oral 10 male hospitalized chronic schizophrenic patients, mean age 39.9 yr (range 22.6-50.6 yr). DRUGS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; CENTRAL NERVOUS SYSTEM DISEASES	Simpson, G.M. Cooper, T.B. Lee, J.H. Young, M.A. 1978
2107 Blood, plasma	Ingestion	GC	5	a) 1-20 ng/ml b) 0-2.8 ng/ml	a) Not given b) Not given	a) Range of peaks (0-8 hr after last dose) for patients after 80 mg/day for 12 wk b) Individual values 12 hr after last dose Estimated from graph Wide variation among subjects. Hospitalized, non-schizophrenic, psychotic patients, 28-49 yr old, 56-91.5 kg, in good physical health. DRUGS; DRUG THERAPY; PSYCHOTROPIC DRUGS; BLOOD PLASMA; URINE; MEASUREMENT METHODS; CANADA	Cooper, S.F. Dugal, R. Bertrand, M.J. 1979
2108 Urine	Ingestion	GC	5	a) 1.25-30.8 ng/ml b) Not detected-4.3 ng/ml	a) Not given b) Not given	a) Range of peaks (0-8 hr after last dose) for patients after 80 mg/day for 12 wk b) Individual values 12 hr after last dose 3 metabolites identified by GC/MS. Hospitalized, non-schizophrenic, psychotic patients, 28-49 yr old, 56-91.5 kg, in good physical health. DRUGS; DRUG THERAPY; PSYCHOTROPIC DRUGS; BLOOD PLASMA; URINE; MEASUREMENT METHODS; CANADA	Cooper, S.F. Dugal, R. Bertrand, M.J. 1979

Dibenzofuran, hexachloro-
55684-94-1
C12-H2-Cl6-O
MW 376.9, BP 230-260 C at 9 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2409 Adipose	Ingestion	GC GC	5	< 0.005-1.7 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978
2410 Liver	Ingestion	GC GC	5	< 0.005-2.6 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN; POLYCHLORINATED BIPHENYLS	Kuroki, H. Masuda, Y. 1978

Dibenzofuran, 1,2,3,7,8-pentachloro-
57803-19-6
C12-H3-Cl5-O
MW 330

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2111 Adipose	Ingestion	CC GC	5	< 0.005-1.0 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978
2112 Liver	Ingestion	CC GC	5	< 0.005-7.1 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978

Dibenzofuran, 2,3,4,7,8-pentachloro-
57117-31-4
C12-H3-Cl5-O
MW 330

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2113 Adipose	Ingestion	CC GC	5	< 0.005-5.7 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978
2114 Liver	Ingestion	CC GC	5	< 0.005-6.9 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978

Dibenzofuran, 2,3,6,8-tetrachloro-
57117-37-0
C12-H4-Cl4-O
MW 306

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2115 Adipose	Ingestion	GC GC	5	< 0.005-0.6 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978
2116 Liver	Ingestion	GC GC	5	< 0.005-0.7 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978

Dibenzofuran, 2,3,7,8-tetrachloro-
51207-31-9
C12-H4-Cl4-O
MW 306

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2117 Adipose	Ingestion	CC GC	5	< 0.005-0.3 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978
2118 Liver	Ingestion	CC GC	5	< 0.005-0.3 ppb	Not given	Japanese victims of PCB poisoning via rice oil. CHLORINE ORGANIC COMPOUNDS; FOOD CONTAMINATION; LIVER; ADIPOSE TISSUE; JAPAN	Kuroki, H. Masuda, Y. 1978

Digitoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy-, (3beta,5beta)- (9 CI)
71-63-6
C41-H64-O13
MW 764.92, MP 256-257 C (anhydrous)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2119 Blood, plasma	Injection	GC/MS	a) 7 b) 7	a) 7.0-31.0 ng/ml b) 0.8-16.7 ng/ml	a) 13.2 ng/ml b) 8.7 ng/ml	a) Patients with no renal insufficiency b) Patients with renal insufficiency Healthy volunteers ages 29 tc 37. Patients with heart failure, taking daily oral maintenance doses of digitoxin. Patients with renal failure under chronic oral digitoxin treatment. DRUGS; BLOOD PLASMA; HEART DISEASES; KIDNEYS; ADULTS; GERMANY; DISEASES	Bodem, G. Unruh, E.V. 1979

Digoxin (9 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2120 Blood, fetal		RIA	1	Not given	1.0 ng/ml	Level at delivery. Mother treated with 0.75 mg digoxin daily during pregnancy and after delivery. 30 yr old mother, first pregnancy Low maternal serum estriol levels pre-delivery. BLOOD SERUM; MILK; UMBILICAL CORD; DRUGS; DRUG THERAPY; CARDIOVASCULAR DISEASES; ADULTS; NEWBORN; PREGNANCY; LACTATION; CANADA; CASE HISTORIES	Finley, J.P. Warman, M.B. Wong, P.Y. Lickrish, G.M. 1979
2121 Blood, plasma	Ingestion	RIA	a) 7 b) 7	a) Not given b) Not given	a) 8.9 ng/ml b) 1.1 ng/ml	a) Congestive heart failure patients, peak, 1-3 hr after 0.75-1.0 mg digoxin b) Congestive heart failure patients, after 6 days of daily digoxin. Values from graph. STEROIDS; DRUGS; BLOOD PLASMA; CARDIOVASCULAR DISEASES; HEART DISEASES; UNITED KINGDOM	Whiting, B. Sumner, D.J. 1978
2122 Blood, plasma	Injection	RIA	22	27-95 ng/ml	Not given	Patients with myocardial infarction complicated by left-ventricular failure, given 0.75-1.0 mg digoxin at 0.125-0.750 mg/min. Peak values. No extracardiac symptoms and no conduction defects due to digoxin. STEROIDS; BLOOD PLASMA; DRUGS; CARDIOVASCULAR DISEASES; HEART DISEASES; SWEDEN	Bertler, A. Bergdahl, B. Karlsson, E. 1978
2123 Blood, plasma		RIA	4	a) Not given b) Not given	a) 1.0 ng/ml b) 0.36 ng/ml	a) 0.25 mg digoxin daily throughout pregnancy b) 0.25 mg digoxin + 80 mg propranolol daily for 10 yr Digoxin not detected in infants. Two pregnant women taking digoxin, one for chronic rheumatic carditis and the other taking digoxin and propranolol for recurrent tachycardia. Both infants were term and had normal neonatal period. DRUGS; MILK; BLOOD PLASMA; ADULTS; INFANTS; AUSTRALIA; DRUG THERAPY	Loughnan, P.M. 1978

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2124 Blood, plasma	Injection	RIA	a) 16 b) 4	a) 0.5-2.5 ng/ml b) 0.6-2.2 ng/ml	a) 1.03 ng/ml b) 1.07 ng/ml	a) Normokalemic patients, treated with digoxin, furosemide, and potassium b) Hypokalemic patients, treated with digoxin, furosemide, hydrochlorothiazide, and potassium Patients receiving daily treatment in Copenhagen, Denmark hospital. Normokalemic patients (age 29-64 yr) with chronic congestive heart failure due to mitral stenosis and mitral insufficiency. Hypokalemic patients with congestive heart failure. Moderate hypokalemia reduced the active tubular secretion of digoxin, thus increasing its half-life. DRUGS; POTASSIUM; BLOOD PLASMA; ADULTS; HEART DISEASES; DENMARK	Steiness, E. 1978
2125 Blood, serum	Injection	RIA	6	a) Not given b) Not given c) Not given	a) 2.07 ng/ml b) 0.28 ng/ml c) 0.16 ng/ml	a) 1 hr post-injection b) 7 hr post-injection c) 24 hr post-injection Healthy males ages 25-35 yr. DRUGS; DIURETICS; BLOOD SERUM; URINE; ADULTS	Tautsumi, K. Fujiki, H. Takeda, M. Fukushima, H. 1979
2126 Blood, serum		RIA	2	a) 2.6-2.1 ng/ml b) 0.6-0.2 ng/ml	a) Not given b) Not given	a) Mother, delivery to 7 days after b) Infant, delivery to 7 days of age Mother treated with 0.75 mg digoxin daily during pregnancy and after delivery, membranes artificially ruptured at 42 wk. Relation of serum levels to small size of infant conjectural. Sex of infant not stated. 30 yr old mother, first pregnancy. Low maternal serum estriol levels pre-delivery. BLOOD SERUM; MILK; UMBILICAL CORD; DRUGS; DRUG THERAPY; CARDIOVASCULAR DISEASES; ADULTS; NEWBORN; PREGNANCY; LACTATION; CANADA; CASE HISTORIES	Finley, J.P. Waxman, M.B. Wong, P.Y. Lickrish, G.M. 1979
2127 Blood, serum	Ingestion	RIA	14	0.43-2.15 ng/ml	1.14 ng/ml	Patients on maintenance doses from 0.125-0.25 mg/day 11 males, 3 females aged 57-88 yr scheduled to undergo urologic surgical procedures. DRUGS; METALS; POTASSIUM; BLOOD SERUM; SPINAL FLUID; DRUG THERAPY	Gayen, J.M. Greenblatt, D.J. Lloyd, B.L. Harmatz, J.S. Smith, T.W. 1978
2128 Blood, serum		RIA	18	0.3-6.5 ng/ml	2.5 ng/ml	Autopsy samples Patients aged 12-92 yr treated with digoxin before death. DRUGS; BLOOD PLASMA; HEART; MUSCLES; AUTOPSIES; ADULTS; CHILDREN	Biddle, T.L. Weintraub, M. Lasagna, L. 1978

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2129 Blood, serum	Injection	RIA	a) 25 b) 12	a) 1.4-7.5 ng/ml b) 1.2-3.0 ng/ml	a) 3.5 + or - 0.39 ng/ml b) 1.73 + or - 0.15 ng/ml	a) After 30 ug/kg, divided, as loading and maintenance doses b) After 20 ug/kg, divided, as loading and maintenance doses. Predose samples 12 hr after > or = 4 maintenance doses. Premature newborns with patent ductus arteriosis, cardiomegaly, hepatomegaly. CARDIOVASCULAR DISEASES; INFANTS; NEWBORN; DRUGS; DRUG THERAPY; TEXAS; BLOOD SERUM; HEART DISEASES	Pinsky, W.W. Jacobsen, J.R. Gillette, P.C. Adams, J. Monroe, L. McNamara, D.G. 1979
2130 Blood, serum	Ingestion		1	11-1.1 ng/ml	Not applicable	7.5 and 67.5 hr after 18 mg, with simultaneous charcoal hemoperfusion and with hemodialysis, reducing the level from 7 to 5.5 ng/ml in 5 hr. Estimated from graph. 41-yr-old woman, ingested 18 mg, University Hospital, San Diego, CA. Nausea, vomiting, lethargy, hypotension, irregular pulse, atrioventricular block, "digitalis effect", hyperkalemia DRUGS; DRUG ABUSE; BLOOD SERUM; CALIFORNIA; MINERAL METABOLISM; ECTASSIUM	Warren, S.E. Panestil, D.D. 1979
2131 Blood, serum	Ingestion	RIA	a) 10 b) 6 c) 10 d) 8	a) Not given b) Not given c) Not given d) Not given	a) 3.4 + or - 0.9 ng/ml b) 2.0 + or - 0.8 ng/ml c) 1.0 + or - 0.3 ng/ml d) 0.9 + or - 0.4 ng/ml	a) < 1 mo of age, 0.02 + or - 0.005 mg/kg/day b) 1-3 mo of age, 0.016 + or - 0.006 mg/kg/day c) 3 mo-1 yr of age, 0.015 + or - 0.005 mg/kg/day d) 1-2 yr-olds, 0.013 + or - 0.004 mg/kg/day. Patients ages 1 wk-2 yr, at the Chaim Sheba Medical Center, Israel, studied from the 3rd day of maintenance therapy. Digitalis intoxication in 3 of 10 neonates and one infant < 1 yr old, all with serum levels > 2 ng/ml. Abnormal ECG associated with cases of digitalis intoxication. DRUGS; DRUG THERAPY; HEART DISEASES; INFANTS; NEWBORN; CHILDREN; BLOOD SERUM; AGE; ISRAEL	Halkin, H. Radomsky, M. Blieden, L. Frand, M. Millman, P. Boichis, H. 1978

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, ME about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2132 Blood, serum			1	a) Not given b) Not given	a) 2.2 ng/ml b) 0.4 ng/ml	a) On 0.25 mg/day digoxin b) 3 days after discontinuation of quinidine. Accompanied by adverse symptoms resolved by increasing digoxin to 0.5 mg/day. 62-yr-old female with congestive heart failure and chronic atrial fibrillation compensated 5 yr on 0.25 mg/day digoxin and 300 mg 4X/day quinidine. DRUG INTERACTION; BLOOD SERUM; CASE HISTORIES; DRUGS; DRUG THERAPY; HEART DISEASES; HEALTH HAZARDS	Moench, T.R. 1980
2133 Brain	Injection	RIA	13	a) 0-13 ng/g b) 0-41 ng/g c) 98-183 ng/g	a) 5.2 ng/g b) 15.9 ng/g c) 144.2 ng/g	a) White matter b) Gray matter c) Choroid plexus Autopsies, 72-99 yr olds, on drug up to 10 yr with last dose 3-22 hr before death. DENMARK; DRUGS; DRUG THERAPY; BRAIN; HEART; AGE; ADULTS; MUSCLES; AUTOPSIES	Krakauer, R. Steiness, E. 1978
2134 Cerebrospinal fluid	Ingestion	RIA	14	0.07-0.77 ng/ml	0.16 ng/ml	Patients on maintenance doses from 0.125-0.25 mg/day 11 males, 3 females aged 57-88 yr scheduled to undergo urologic surgical procedures. DRUGS; METALS; POTASSIUM; BLOOD SERUM; SPINAL FLUID; DRUG THERAPY	Gayes, J.M. Greenblatt, D.J. Lloyd, B.L. Harmatz, J.S. Smith, T.W. 1978
2135 Heart		RIA	18	18-262 ng/g wet wt	94.2 ng wet wt	Autopsy samples-left ventricle, fat removed Patients aged 12-92 yr treated with digoxin before death. DRUGS; BLOOD PLASMA; HEART; MUSCLES; AUTOPSIES; ADULTS; CHILDREN	Biddle, T.L. Weintraub, M. Lasagna, L. 1978
2136 Heart	Injection	RIA	13	a) 21-92 ng/g b) 49-193 ng/g c) 98-271 ng/g	a) 49.6 ng/g b) 146.4 ng/g c) 183 ng/g	a) Left atrium b) Right ventricle c) Left ventricle Autopsies, 72-99 yr olds, on drug up to 10 yr with last dose 3-22 hr before death. DENMARK; DRUGS; DRUG THERAPY; BRAIN; HEART; AGE; ADULTS; MUSCLES; AUTOPSIES	Krakauer, R. Steiness, E. 1978

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Digoxin (8 CI)
Card-20(22)-enolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-12,14-dihydroxy-, (3beta,5beta,12beta)- (9 CI)
20830-75-5
C41-H64-O14
MW 780.92, MP about 265 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2137 Milk		RIA	1	Not given	1.9 ng/ml	Level 7 day post partum. Patient received 0.75 mg digoxin daily during pregnancy and after delivery. 30 yr old woman, first pregnancy Low maternal serum estriol levels pre-delivery. BLOOD SERUM; MILK; UMBILICAL CORD; DRUGS; DRUG THERAPY; CARDIOVASCULAR DISEASES; ADULTS; NEWBORN; PREGNANCY; LACTATION; CANADA; CASE HISTORIES	Finley, J.P. Waxman, H.B. Wong, P.Y. Lickrish, G.M. 1979
2138 Milk		RIA	2	a) 0.6-0.96 ng/ml b) 0.28-0.61 ng/ml	a) 0.78 ng/ml b) 0.41 ng/ml	a) 0.25 mg digoxin daily throughout pregnancy b) 0.25 mg digoxin + 82 mg propranolol daily for 10 yr Pregnant women taking digoxin, one for chronic rheumatic carditis and the other taking digoxin and propranolol for recurrent tachycardia. Both infants were term and had normal neonatal period. DRUGS; MILK; BLOOD PLASMA; ADULTS; INFANTS; AUSTRALIA; DRUG THERAPY	Loughnan, P.M. 1978
2139 Muscle	Injection	RIA	13	a) 0-28 ng/g b) 0-44 ng/g	a) 14.2 ng/g b) 29.8 ng/g	a) Musculus psoas major b) Diaphragm Autopsies of 13 people 72-99 yr old, on drug up to 10 yr with last dose 3-22 hr before death. DENMARK; DRUGS; DRUG THERAPY; BRAIN; HEART; AGE; ADULTS; MUSCLES; AUTOPSIES	Krakauer, R. Steinems, E. 1978

Dimethylamine, N-nitroso- (8 CI)
Methanamine, N-methyl-N-nitroso- (9 CI)
62-75-9
C2-H6-N2-O
MW 74.1, BP 152 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2180 Blood, whole		GC UV	38	0-1.5 ng/ml	0.6 ng/ml	No significant differences between sexes in smokers or in fasting subjects. Normal subjects aged 21-60 yr NITROSAMINES; BLOOD; COMPARATIVE EVALUATIONS; SEX; SMOKING	Lakritz, L. Simenhoff, M.L. Dunn, S.R. Fiddler, W. 1980

Dimethylpolysiloxane (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2141 Breast	Injection	IR	1	Not given	5,335 mg/100 g	Specimen obtained about 1 yr after death of 30 yr old. Death occurred within minutes after injection. SILICON; BREAST; KIDNEYS; LIVER; LUNGS; SPLEEN; CASE HISTORIES	McCurdy, H.H. Solomons, E.T. 1977
2142 Kidney	Injection	IR	1	17-25 mg/100 g	21 mg/100 g	Specimen obtained about 1 yr after death of 30 yr old. Death occurred within minutes after injection. SILICON; BREAST; KIDNEYS; LIVER; LUNGS; SPLEEN; CASE HISTORIES	McCurdy, H.H. Solomons, E.T. 1977
2143 Liver	Injection	IR	1	28-34 mg/100 g	31 mg/100 g	Specimen obtained about 1 yr after death of 30 yr old. Death occurred within minutes after injection. SILICON; BREAST; KIDNEYS; LIVER; LUNGS; SPLEEN; CASE HISTORIES	McCurdy, H.H. Solomons, E.T. 1977
2144 Lung	Injection	IR	1	38-323 mg/100 g	143 mg/100 g	Specimen obtained about 1 yr after death of 30 yr old. Death occurred within minutes after injection. SILICON; BREAST; KIDNEYS; LIVER; LUNGS; SPLEEN; CASE HISTORIES	McCurdy, H.H. Solomons, E.T. 1977
2145 Spleen	Injection	IR	1	74-75 mg/100 g	75 mg/100 g	Specimen obtained about 1 yr after death of 30 yr old. Death occurred within minutes after injection. SILICON; BREAST; KIDNEYS; LIVER; LUNGS; SPLEEN; CASE HISTORIES	McCurdy, H.H. Solomons, E.T. 1977

Dipyrido(1,2-a:2',1'-c)pyrazinediium, 6,7-dihydro-
2764-72-9
C12-H12-N2
MW 344.07, MP below 320 C (decomp), also reported as 335-340 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2186 Blood, serum	Ingestion		1	a) Not applicable b) Not applicable	a) 2.522 ppm b) 0.312 ppm	a) 35.5 hr after ingestion of Weglone (200 g diquat/l) b) 44 hr after ingestion During this time, extracoporeal hemodialysis was used. Death occurred 47 hr after ingestion. 45 yr old Suicide PESTICIDES; BLOOD SERUM; SUICIDE; GERMANY	Okonek, S. Hofmann, A. Henningmen, B. 1976
2187 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 61.2% b) 0.3%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

Dodecylamine, N,N-dimethyl-, N-oxide (8 CI)
1-Dodecanamine, N,N-dimethyl-, N-oxide (9 CI)
1643-20-5
C14-H31-N-O
MW 229.46

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2149 Blood, whole	Ingestion	Radiometry	2	0.25-0.6 ug/g	0.42 ug/g	1 hr after ingesting 50 mg of [1-dodecyl-C14]DDAO (peak value). Volunteers URINE; BLOOD	Rice, D.P. 1977
2149 Urine	Ingestion	Radiometry	2	a) 36.8-49.8% b) 43.9-57.3%	a) 43.3% b) 50.6%	a) 24 hr after ingesting 50 mg of [1-dodecyl-C14]DDAO b) 144 hr after ingesting 50 mg of [1-dodecyl-C14]DDAO, total amount Other data available. Volunteers URINE; BLOOD	Rice, D.P. 1977

Ergoline-8-acetonitrile, 2-chloro-6-methyl-, (8beta)-
36945-03-6
C17-H18-Cl-N3
MW 299.83

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2150 Blood, plasma	Ingestion	Radiometry GC/MS	a) 5 b) 1 c) 1	a) 15-2 ng/ml b) 5-118 ng/ml c) 8-17 ng/ml	a) Not given b) Not applicable c) Not applicable	a) Levels of radioactivity (as lergotrile equivalents) 2 and 72 hr after 3 mg (45uCi) of N-C14H3-lergotrile mesylate-parent compound not detected-data from graph-controls b) Levels of norlergotrile 30 and 120 min after 12.5 mg lergotrile 4 times daily for 2 wk-parent compound not detected c) Levels of legotrile 60 and 120 min after 30 mg 5 times daily for 8 wk Other data available. Healthy volunteers, 21-38 yr old, Wishard Memorial Hospital. Patients with Parkinson's disease, 57-64 yr old, National Institutes of Health. DRUGS; DRUG THERAPY; METABOLITES; BLOOD PLASMA; IN VIVO ANALYSIS; INDIANA	Rubin, A. Lemberger, L. Dhahir, P. Warrick, P. Crabtree, R.E. Obermeyer, B.D. Wolen, R.L. Rowe, H. 1978

Erythromycin
114-07-8
C37-H67-N-O13
MW 733.92, MP 135-140 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2151 Blood, plasma	Ingestion	Immunodiffusion	10	a) 0.8-0.9 ug/ml b) 1.3-1.7 ug/ml c) 1.5-1.9 ug/ml d) 2.8-3.5 ug/ml	a) 0.6 ug/ml b) 1.5 ug/ml c) 1.7 ug/ml d) 3.6 ug/ml	a) Single erythromycin estolate dose b) Single erythromycin stearate dose c) Repeated erythromycin estolate doses d) Repeated erythromycin stearate doses Range is range of means for different administration methods. Levels are for erythromycin base. Erythromycin 2'-propanoate also present. Healthy volunteers aged 21-42 yr (mean 29) and weighing 61-89 kg. DRUGS; ANTIBIOTICS; ERYTHROMYCINS; BLOOD PLASMA	Welling, P.G. Elliott, R.L. Pitterle, M.E. Corrick-West, M.P. Lyons, L.L. 1979
2152 Blood, serum	Ingestion	Microbiological	6	a) 0.01-1.16 ug/ml b) 0.03-1.43 ug/ml c) 0.03-1.03 ug/ml d) 0.05-1.43 ug/ml e) 0.13-2.65 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) After high carbohydrate meal b) After high fat meal c) After high protein meal d) Fasting e) Fasting Subjects given 500 mg erythromycin stearate with 250 ml (a,b,c,e) or 20 ml (d) of water. Peaks, 2 hr after dose. Range is range of means. 2 females (22 and 24 yr old, 64 and 50 kg), 4 males (22-33 yr old, 66-83 kg) DRUGS; ANTIBIOTICS; ERYTHROMYCINS; BLOOD SERUM	Welling, P.G. Huang, H. Hewitt, P.F. Lyons, L.L. 1978
2153 Blood, serum	Ingestion	Microbiological	a) 18 b) 12	a) 1.693-0.097 ug/ml b) 3.361-0.516 ug/ml	a) Not applicable b) Not applicable	a) Range of means, 0.8 and 6 hr after 11.8 + or - 2.2 mg/kg. Initial value, 1.27 ug/ml at 0.5 hr. Fasting before and after dose b) Range of means, 1.2 and 6 hr after 13.3 mg/kg. Initial value, 1.24 ug/ml at 0.5 hr. Fed 0.5 hr before dose Dose as the ethylsuccinate. Pediatric patients, 6-65 mo old, with acute infections. No adverse reactions. ERYTHROMYCINS; DRUGS; DRUG THERAPY; INFECTION; INFANTS; CHILDREN; LOUISIANA; ANTIBIOTICS; COMPARATIVE EVALUATIONS	Coyne, T.C. Shum, S. Chun, R.H.C. Jeansonne, L. Shirkey, H.C. 1978
2154 Blood, serum	Ingestion	Microbiological	a) 18 b) 20 c) 18 d) 11	a) 3.4-2.0 ug/ml b) 4.1-2.8 ug/ml c) 0.77-0.07 ug/ml d) 1.2-0.18 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) Fasted, 10 mg/kg of the estolate b) Fed, 10 mg/kg of the estolate c) Fasted, 15 mg/kg of the ethylsuccinate d) Fed, 15 mg/kg of the ethylsuccinate Fasting, 2 hr before and after dose. Fed, 118 ml milk or formula with dose. Values are 0.5-6 hr means 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-46 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

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Erythromycin
114-07-8
C37-H67-N-O13
MW 733.92, MP 135-140 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2155 Saliva	Ingestion	Microbiological	a) 38 b) 29	a) 0.015-1.0 ug/ml b) 0-3.0 ug/ml	a) Not given b) Not given	a) 10 mg/kg estolate salt, mean peaks 0.87 and 0.75 ug/ml for fasted and fed, respectively b) 1 5 mg/kg ethylsuccinate salt, mean peaks 0.67 and 0.69 ug/ml for fasted and fed, respectively Values are overall range (fasted plus fed) 2-6 hr. Fasting, 2 hr before and after dose. Fed, 118 ml milk or formula with dose 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
2156 Tears	Ingestion	Microbiological	47	a) Not given b) Not given c) Not given d) Not given	a) 6.1 ug/ml b) 6.9 ug/ml c) 2.7 ug/ml d) 2.8 ug/ml	a) Mean peak as estolate, fasting b) Mean peak as estolate, fed c) Mean peak as ethylsuccinate, fasting d) Mean peak as ethylsuccinate, fed Fasting, 2 hr before and after dose. Fed, 118 ml milk or formula with dose 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

Erythromycin, 2'-propionate (8 CI)
Erythromycin, 2'-propanoate (9 CI)
134-36-1
C40-H71-N-O14
MW 789.99, MP 122-126 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2157 Blood, plasma	Ingestion	Immunodiffusion	10	a) 1.5-2.8 ug/ml b) 3.5-4.5 ug/ml	a) 1.8 ug/ml b) 3.8 ug/ml	a) Single erythromycin estolate dose b) Repeated erythromycin estolate doses Range is range of means for different administration methods. Erythromycin base also present. Healthy volunteers aged 21-42 yr (mean 29) and weighing 61-89 kg. DRUGS; ANTIBIOTICS; ERYTHROMYCINS; BLOOD PLASMA	Welling, P.G. Elliott, H.L. Pitterle, M.E. Corrick-West, M.P. Lyons, L.L. 1979

Estra-1,3,5(10),6,8-pentaene-3,17alpha-diol (8 CI)
Estra-1,3,5(10),6,8-pentaene-3,17-diol, (17alpha)- (9 CI)
6639-99-2
C18-H20-02
MW 268.36

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2158 Urine		GC	a) 12 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 69.4 ug/24 hr b) 16.3%/24 hr c) 18.9%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available 12 healthy females, aged 37 to 57 yr, wt 54-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, E.M. Massarano, R.P. Kho, S.T. Adams, W.P. 1978

Estra-1,3,5(10),7-tetraen-17-one, 3-hydroxy-
474-86-2
C18-H20-O2
MW 268.34, MP 230-240 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2359 Urine		GC	a) 11 b) 3	a) Not given b) Not given	a) 14.3 ug/24 hr b) 1.9%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (2.5 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, wt 54-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, R.W. Masserano, E.P. Kho, B.T. Adams, W.P. 1978

Estra-1,3,5(10),7-tetraene-3,17alpha-diol (8 CI)
Estra-1,3,5(10),7-tetraene-3,17-diol, (17alpha)- (9 CI)
651-55-8
C18-H22-O2
MW 270.36, MP 205.5-205.6 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2160 Urine		GC	a) 12 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 26.0 ug/24 hr b) 5.8%/24 hr c) 4.9%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, wt 54-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, E.M. Massarano, R.P. Kho, B.T. Adams, W.P. 1978

Estra-1,3,5(10),7-tetraene-3,17beta-diol (9 CI)
Estra-1,3,5(10),7-tetraene-3,17-diol, (17beta)- (9 CI)
3563-27-7
C18-H22-O2
MW 270.36, MP 174.5-174.6 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2161 Urine		GC	a) 12 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 27.4 ug/24 hr b) 4.7%/24 hr c) 5.0%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, wt 54-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, B.W. Mazzerano, E.P. Kho, E.T. Adams, W.P. 1978

Estradiol (8 CI)
Estra-1,3,5(10)-triene-3,17-diol, (17beta)- (9 CI)
50-28-2
C18-H24-O2
MW 272.37, MP 173-179 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2162 Urine		GC	a) 12 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 67.5 ug/24 hr b) 5.3%/24 hr c) 5.1%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, wt 54-73 kg HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, R.H. Masserano, R.P. Kho, B.T. Adams, W.P. 1978

Estradiol, 3-(bis(2-chloroethyl)carbamate) dihydrogen phosphate (8 CI)
Estra-1,3,5(10)-triene-3,17-diol (17beta)-, 3-(bis(2-chloroethyl)carbamate) 17-(dihydrogen phosphate) (9 CI)
4891-15-0
C23-H32-Cl2-N-O6-P
MW 520.43, MP 155 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2163 Blood, plasma	Ingestion	HPLC	11	a) 268-993 ng/ml b) 23-88 ng/ml c) 32-200 ng/ml d) 3-16 ng/ml	a) 531.45 + or - 245 ng/ml b) 47.64 + or - 23 ng/ml c) 121.18 + or - 57 ng/ml d) 10.9 + or - 4.8 ng/ml	a) Estromustine b) Estramustine c) Estrone d) Estradiol Metabolites 1.5-18 hr after last dose of 280-420 mg to patients on drug 4 days-2.5 yrs. Mean daily dose 13.35 + or - 1.86 mg/kg. Other data available. Patients with advanced prostate cancer. No gynecomastia despite estrone and estradiol levels 100 times endogenous levels. DRUGS; CHEMOTHERAPY; RATS; DOGS; BLOOD PLASMA; NEOPLASMS; STEROIDS	Dixon, R. Brooks, H. Gill, G. 1980

Estrone (8 CI)
Estra-1,3,5(10)-trien-17-one, 3-hydroxy- (9 CI)
53-16-7
C18-H22-O2
MW 270.36, MP d-form 254.5-256 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2164 Urine		GC	a) 11 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 330.4 ug/24 hr b) 25.5%/24 hr c) 26.8/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, wt 58-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, R.H. Nasserano, R.P. Kho, B.T. Adams, W.P. 1978

Ethane, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
53-19-0
C14-H10-Cl4
SW 320.05, NE 76-78 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2165 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) Not given b) Not given c) <0.0001-0.2686 ppm d) <0.0001-0.0054 ppm	a) <0.0001 ppm b) <0.0001 ppm c) 0.0128 ppm d) 0.0005 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; EDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974
2166 Blood, plasma		GC	29	Not given	0.0072 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DIC; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2167 Milk		GC	29	Not given	0.0060 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DIC; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977

Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI)
Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 350.46, MP 221-222 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2168 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) <0.0001-0.0428 ppm b) 0.0028-0.7140 ppm c) 0.1085-7.0450 ppm d) <0.0001-0.1125 ppm e) <0.0001-0.1666 ppm f) 0.1270-2.9166 ppm	a) 0.0134 ppm b) 0.1913 ppm c) 1.8190 ppm d) 0.0186 ppm e) 0.0192 ppm f) 0.9769 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2169 Adipose		CC GC	168	0.002-0.402 ug/g	0.006 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, R.H. Davies, D.J.A. 1977
2170 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0055-0.5569 ppm b) 0.0079-1.1460 ppm c) 0.0053-1.3540 ppm d) 0.0064-1.2416 ppm	a) 0.0706 ppm b) 0.1301 ppm c) 0.1046 ppm d) 0.1206 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974
2171 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.14 ppm b) 0.14 ppm c) 0.10 ppm d) 0.11 ppm e) 0.10 ppm f) 0.08 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974

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Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI)
Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 350.46, MF 221-222 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2172 Blood		GC	7	3.0-23 ppb	11.6 ppb	1975 Yugoslavia survey, 140 samples showed no p,p'-TDE. Values are for serum or plasma. 65 males and 82 females, aged 8 to 92 yr (mean age 42 yr) in Croatia. HEXACHLOROCYCLOHEXANE; DDE; DDD; DDT; PESTICIDES; BLOOD SERUM; BLOOD PLASMA; YUGOSLAVIA; CHLORINATED HYDROCARBONS	Reiner, E. Krasthacker, B. Stipcevic, M. Stefanac, Z. 1977
2173 Blood		GC	a) 121 b) 497	a) 2-70 ppb b) Not given	a) 11 ppb b) 2.5 ppb	a) Samples in which p,p'TDE was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; EDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
2174 Blood, plasma		GC	29	Not given	0.0087 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2175 Blood, serum			1	Not applicable	5.0 ppb	Household dust levels 2.22-19.21 ppm. Adult farmer from Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
2176 Blood, whole		CC GC	26	Not given	0.010 ppm	Occupationally exposed to DDT DIT; DDE; DDD; PESTICIDES; BLOOD; ADIPOSE TISSUE; CANADA; OCCUPATIONAL HAZARDS; AUTOPSIES; BIOACCUMULATION	Brown, J.R. Chow, L.Y. 1975

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Ethane, 1,1-dichloro-2,2-bis(p-chlorphenyl)- (8 CI)
Benzene, 1,1'-(2,2-dichloroethylidene)bis(4-chloro- (9 CI)
72-54-8
C14-H10-Cl4
MW 350.46, MP 221-222 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2177 Milk		GC	29	Not given	0.0099 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lewesch, C. 1977
2178 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-1.85 ppm b) Not detectable-0.368 ppm	a) 0.151 ppm b) 0.023 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients, (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patinets (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; EDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; CHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, W.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
2179 Milk, fat		GC-EC	a) 34 b) 6	a) 0-0.83 ppm b) 0-0.01 ppm	a) 0.08 ppm b) 0.002 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; EDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, R.W. D'Ercole, A.J. Cain, J.D. Arthur, R.D. 1979

Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, BP 78-78.5 C (cor)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2180 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) <0.0001-0.0260 ppm b) <0.0001-0.1100 ppm c) 0.0180-0.9800 ppm d) <0.0001-0.0820 ppm e) <0.0001-1.4750 ppm f) 0.0455-10.4610 ppm	a) 0.0100 ppm b) 0.0130 ppm c) 0.2381 ppm d) 0.0125 ppm e) 0.1320 ppm f) 0.1535 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Levels are for o,p'-DDT+o,p'-DDD Data available for intermediate age groups. Autopsy specimens, 1967-1971 from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2181 Adipose		GC GC	168	0.001-0.229 ug/g	0.031 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, E.H. Davies, D.J.A. 1977
2182 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0005-0.2518 ppm b) 0.0082-1.6180 ppm c) 0.0052-1.2454 ppm d) 0.0103-2.3529 ppm	a) 0.0511 ppm b) 0.1588 ppm c) 0.1183 ppm d) 0.1878 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974
2183 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.34 ppm b) 0.25 ppm c) 0.24 ppm d) 0.25 ppm e) 0.24 ppm f) 0.24 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974

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Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, BP 74-74.5 C (cor)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2184 Blood, plasma		GC	29	Not given	0.0107 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2185 Milk		GC	29	Not given	0.0073 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2186 Milk		GC TLC	49	1.6-120.9 ppb	18.53 ppb	Milk samples, hospitals in urban Oslo. 8 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976
2187 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-88 ng/g	a) 3 ng/g b) 1 ng/g c) 6 ng/g d) Not detectable e) 1 ng/g f) 3 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TRIPHENYLS	Mes, J. Davies, D.J. 1979

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Ethane, 1,1,1-trichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)- (9 CI)
789-02-6
C14-H9-Cl5
MW 354.49, BP 78-78.5 C (cor)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2189 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-0.072 ppm b) Not detectable-0.169 ppm	a) 0.003 ppm b) 0.031 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Brans, G.W. 1979
2189 Milk, fat		GC-EC	a) 38 b) 6	a) 0-1.05 ppm b) 0.02-0.14 ppm	a) 0.21 ppm b) 0.050 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, R.W. D'Ercole, A.J. Cain, J.D. Arthur, R.D. 1979

Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2190 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) 0.0030-1.2500 ppm b) 0.0940-5.0000 ppm c) 0.3570-34.2850 ppm d) 0.0028-0.3480 ppm e) < 0.0001-1.7850 ppm f) 0.5140-12.7010 ppm	a) 0.2367 ppm b) 2.6566 ppm c) 7.1626 ppm d) 0.1040 ppm e) 2.1533 ppm f) 3.6708 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2191 Adipose		GC GC	168	0.018-2.057 ug/g	0.439 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; MONACHLOR; HEXACHLOROCYCLOHEXANE; CHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, R.W. Davies, D.J.A. 1977
2192 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0409-8.9235 ppm b) 0.0363-9.5000 ppm c) 0.0200-4.6135 ppm d) 0.0642-6.7278 ppm	a) 0.7914 ppm b) 1.0409 ppm c) 0.7938 ppm d) 0.9239 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; EDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974
2193 Adipose		GC-EC	3	a) 0.48-0.64 ug/g wet wt b) 0.26-0.38 ug/g wet wt c) 0.26-0.35 ug/g wet wt	a) 0.56 ug/g wet wt b) 0.30 ug/g wet wt c) 0.31 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Tissue collected during autopsies on accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; PHTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Mes, J. Campbell, D.S. 1976

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (8 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.9x10(-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2194 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4.12 ppm b) 3.58 ppm c) 3.62 ppm d) 3.30 ppm e) 3.84 ppm f) 2.70 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-America) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DIE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
2195 Adipose			268	Not given	1.260 mg/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Ponival, L. Uhnak, J. Madaric, A. 1977
2196 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.9 ppm b) 0.3 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies. Highest in 22-45 yr olds b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DET; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.F. Clausen, J. 1979
2197 Adipose			1	0.33-0.37 ppm	Not given	Concentration range 4-56 days ingestion of 170.1 g 75% dichlofenthion. Suicide attempt by 62-yr-old male. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Hague, R. Morgade, C. Sonnebora, R.E. Vaclavek, C. 1975
2198 Blood		GC	a) 92 b) 264	a) 0.005-0.084 ppm b) 0.001-0.077 ppm	a) 0.019 ppm b) 0.018 ppm	a) Farmers in Ontario, 1970-1972 b) Packers and others, in Ontario, 1970-1972 Data on levels in soil and fish also available Farmers and packing house employees in Holland Marsh, Ontario, starting 6 mo after DDT was banned there. PESTICIDES; DDT; BLOOD; CANADA	Brown, J.F. Chow, L.T. Chai, F.C. 1975

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2199 Blood		GC	20	2.2-81 ppb	22.7 ppb	1975 Yugoslavia survey, 127 samples showed no p,p'-DDT. Values are for serum or plasma. 65 males and 82 females, aged 8 to 92 yr (mean age 42 yr) in Croatia. HEXACHLOROCYCLOHEXANE; DDE; DDD; DDT; PESTICIDES; BLOOD SERUM; BLOOD PLASMA; YUGOSLAVIA; CHLORINATED HYDROCARBONS	Beiner, E. Krauthacker, B. Stipcevic, M. Stefanac, Z. 1977
2200 Blood		GC	a) 198 b) 497	a) 2-125 ppb b) Not given	a) 12 ppb b) 4.5 ppb	a) Samples in which p,p'DDT was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; EDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
2201 Blood, plasma		GC	29	Not given	0.0133 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2202 Blood, plasma		GC-EC	a) 23 b) 23 c) 14	a) Not given b) Not given c) Not given	a) 3.86 ug/l b) 3.21 ug/l c) 3.21 ug/l	a) Patients on hemodialysis for chronic renal failure, predialysis b) Patients on hemodialysis for chronic renal failure, postdialysis c) Controls Patients at Charity Hospital in New Orleans, Louisiana, and relatives of patients (controls) or workers at the unit (controls). PESTICIDES; BLOOD PLASMA; LOUISIANA; DDE; DDT; PENTACHLOROPHENOL	Pearson, J.E. Schultz, C.D. Rivers, J.E. Gonzalez, F.M. 1976

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2203 Blood, serum		GC-EC	a) 84 b) 56 c) 36 d) 11 e) 94 f) 96	a) 5-68 ppb b) 5-21 ppb c) 5-19 ppb d) 5-6 ppb e) 5-14 ppb f) 5-68 ppb	a) 17.9 ppb b) 9.4 ppb c) 9.5 ppb d) 5.4 ppb e) 7.7 ppb f) 8.1 ppb	a) Males, households with one or more members in pesticide industry b) Females, households with one or more members in pesticide industry c) Males, farms where pesticides were frequently used d) Females, farms where pesticides were frequently used e) Controls (male) f) Controls (female) Mean household dust residues: 30.66 ppm (a-b), 8.87 ppm (c-d), and 6.90 ppm (e-f). Adult residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
2204 Blood, whole		GC GC	26	Not given	0.030 ppm	Occupationally exposed to DDT DDT; DDE; DDD; PESTICIDES; BLOOD; ADIPOSE TISSUE; CANADA; OCCUPATIONAL HAZARDS; AUTOPSIES; BIOACCUMULATION	Brown, J.R. Chow, L.Y. 1975
2205 Milk			57	0.01-0.84 ppm	0.09 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; NONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Kutz, F.W. Strassman, S.C. Tobs, A.E. 1976
2206 Milk		GC	29	Not given	0.0122 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lesesch, C. 1977
2207 Milk		GC TLC	50	2.3-138.3 ppb	17.89 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in the central part of southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2208 Milk		GC	2 of 51	Not given	0.008 ppm	Random subjects of greater St. Louis, MO, metropolitan area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbruster, J. Kettelhut, L.L. Drucker, B. 1977
2209 Milk		GC	a) 23 b) 20 c) 12 d) 40 e) 38 f) 19 g) 20 h) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 1.3 ppm, fat basis b) 1.4 ppm, fat basis c) 1.3 ppm, fat basis d) 0.9 ppm, fat basis e) 0.9 ppm, fat basis f) 0.8 ppm, fat basis g) 0.9 ppm, fat basis h) 1.0 ppm, fat basis	a) 1970 b) 1971 c) 1972 d) 1973 e) 1974 f) 1975 g) 1976 h) 1977 Estimated from graph Mothers in Osaka Prefecture BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; JAPAN; MILK; POLYCHLORINATED BIPHENYLS	Yakushiji, T. Watanabe, I. Kuwabara, K. Yoshida, S. Hori, S. Fukushima, S. Kashimoto, T. Koyama, K. Kunita, N. 1979
2210 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-21 ng/g	a) 5 ng/g b) 7 ng/g c) 6 ng/g d) 5 ng/g e) 8 ng/g f) 6 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979
2211 Milk, fat				Not given	2287 mg/kg	85 samples-each is average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokoley, A. Rosival, L. Uhnak, J. Madaric, A. 1977
2212 Milk, fat		GC	a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 1.3 mg/kg b) 1.0 mg/kg c) 0.63 mg/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974

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Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-chloro- (9 CI)
50-29-3
C14-H9-Cl5
MW 354.50, MP 108.5-109 C, BP 260 C, VP 1.5X10(E-7) mm Hg at 20 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2213 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-11.25 ppm b) Trace-8.35 ppm	a) 1.14 ppm b) 0.437 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; EDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
2214 Milk, fat		GC-EC	a) 34 b) 6	a) 0.34-18.65 ppm b) 0.26-0.53 ppm	a) 8.25 ppm b) 0.390 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; EDE; DDD; EDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, H.W. D'Ercole, A.J. Cain, J.D. Arthur, H.D. 1979
2215 Milk, whole		GC-EC	22	0.002-0.025 ppm	0.010 ppm	Survey, Western Australia, 1970-1971 22 nursing mothers, wt 46-66 kg, living within a 30 mi radius of Perth, Western Australia MILK; PESTICIDES; AUSTRALIA; DDT; DDE; DIELDRIN; HEXACHLOROBENZENE	Stacey, C.I. Thomas, B.W. 1975
2216 Milk, whole		GC	a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 0.040 mg/kg b) 0.030 mg/kg c) 0.020 mg/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974

Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)- (8 CI)
Benzene, 1,1'-(2,2,2-trichloroethylidene)bis(4-methoxy- (9 CI)
72-43-5
C16-H15-C13-02
MW 345.65, MP 78-78.2 C (dimorphic crystals) or 86-88 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2217 Blood		GC	a) 13 b) 497	a) 10-38 ppb b) Not given	a) 19 ppb b) < 1 ppb	a) Samples in which methoxychlor was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; EDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975

Ethanol, 2-(2-(4-(p-chloro-alpha-phenylbenzyl)-1-piperazinyl)ethoxy)- (8 CI)
Ethanol, 2-(2-(4-((4-chlorophenyl)phenylmethyl)-1-piperazinyl)ethoxy)- (9 CI)
68-88-2
C21-H27-Cl-N2-O2
MW 374.92, MP 193 C (dihydrochloride)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2219 Blood, plasma	Ingestion	GC/MS	8	20-35 ng/ml	Not applicable	Range of means 1 and 8 hr after 100-mg tablet as the hydrochloride. Data fit one-compartment open model. Normal volunteers, fasted overnight. DRUGS; DRUG THERAPY; BLOOD PLASMA; MEASUREMENT METHODS; ADULTS; METABOLISM; CHLORINE ORGANIC COMPOUNDS	Fonda, N.G. Hobbs, D.C. Stambaugh, J.E. 1979

Ethanol, 2,2,2-trichloro-
115-20-8
C2-H3-Cl3-O
MW 149.42, MP 18 C, BP 151-153 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2219 Blood			16	0.6-133 ug/ml	38.4 ug/ml	Death caused by drug combinations. Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2220 Blood, plasma	Ingestion	GC	1	a) 181-200 ug/ml b) 81-100 ug/ml c) 330-45 ug/ml	a) 165.8 ug/ml b) 86 ug/ml c) Not applicable	a) Arterial blood, during 4 hr of hemodialysis starting at 21.5 hr b) Venous blood, during 4 hr of hemodialysis starting at 21.5 hr. Average clearance was 122.8 ml/min, 5.21 g removed c) Change 2-90 hr after ingestion. Undetectable at 131 hr 38-yr-old white woman with long psychiatric history admitted after ingesting 38 g chloralhydrate. > 2 hr after dose: cyanotic, deeply comatose, hypotensive, respiratory distress, abnormal EKG. HYPNOTICS; DRUGS; DRUG ABUSE; BLOOD PLASMA; CALIFORNIA; LAVAGE; NEUROLOGIC MANIFESTATIONS	Stalker, M.E. Gambertoglio, J.G. Fukumitsu, C.J. Naughton, J.L. Benet, L.Z. 1978
2221 Blood, plasma	Ingestion	GC	7	a) 2-0.4 mg/l b) 0.8-0.3 mg/l c) 7.8-5.3 mg/l d) 6.2-6.2 mg/l	a) 3.6 + or - 1.6 mg/l b) 1.7 + or - 0.5 mg/l c) 8.5 + or - 1.5 mg/l d) 8.2 + or - 0.6 mg/l	a) 15 mg/kg chloral hydrate glucuronide conjugate levels b) 22 mg/kg triclofos, glucuronide conjugate levels c) 15 mg/kg chloral hydrate, free form levels d) 22 mg/kg triclofos, free form levels Ranges are means at about 1 and 6 hr, means are peak means. No differences between drugs at any time (P> 0.05). Gastrointestinal gas and flatus during chronic therapy. SEDATIVES; HYPNOTICS; DRUGS; DRUG THERAPY; METABOLISM; METABOLITES; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Sellers, E.M. Lang-Sellers, M. Koch-Weser, J. 1978
2222 Urine	Inhalation	Colorimetry	a) and b) 19 c) 9	a) 0-84 mg/g creatinine b) 56-280 mg/g creatinine c) < 2 mg/g creatinine	a) 34 mg/g creatinine b) 145 mg/g creatinine c) < 2 mg/g creatinine	a) Morning samples, exposed workers b) Afternoon samples, exposed workers c) Controls Exposure levels of trichloroethylene: 176-420 mg/Cu m CHLORINE ORGANIC COMPOUNDS; URINE; METABOLITES; OCCUPATIONAL HAZARDS; OHIO	Lowry, L.K. Vandervort, R. Polakoff, P.L. 1978

Ethanol, 2,2',2'',2'''-((4,8-dipiperidinopyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetra- (8 CI)
Ethanol, 2,2',2'',2'''-((4,8-di-1-piperidinylpyrimido(5,4-d)pyrimidine-2,6-diyl)dinitrilo)tetrakis- (9 CI)
58-32-2
C28-H40-N8-O4
MW 504.62, MP 163 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2223 Blood, plasma	Ingestion	Fluorometry	8	a) 42-1,608 ng/ml b) 8-1,019 ng/ml	a) 625 + or - 246 ng/ml b) 614 + or - 211 ng/ml	a) Peak - 3 hr after first of 3x75 mg doses/day b) Peak - 1 hr after first of 3x75 doses/day of drug + 325 mg aspirin Means and S.E. Higher levels after second dose of drug + aspirin Other data available. Healthy volunteers, 69-79 kg DRUGS; DRUG THERAPY; COMPARATIVE EVALUATIONS; BLOOD PLASMA; MINNESOTA	Tyce, G.M. Fuster, V. Owen, C.A., Jr. 1979

Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 60 mm Hg at 19 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2224 Blood	Ingestion	Enzymatic	29	136-480 mg/dl	Not given	Initial levels. 21 exceeded 300 mg/dl. 26 males and 3 females, 17-60 yr of age, treated for acute ethanol (vodka) poisoning. 20 were comatose on arrival, 9 were excited and aggressive. Physical and mental control regained after 24 hr. POLAND; ALCOHOLIC BEVERAGES; BLOOD	Bogusz, M. Pach, J. Stasko, W. 1977
2225 Blood			2	0.053%-0.096% (W/V)	Not applicable	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2226 Blood			331	0.01-0.71 mg/ml	0.18 mg/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; STAR; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2227 Blood	Ingestion	GC Enzymatic	21	a) 37-431 mg % b) 39-422 mg %	a) 192.47 mg % b) 205.24 mg %	a) By GC b) By alcohol dehydrogenase method Range of means based on triplicate determinations. Two methods highly correlated, r=0.997. Postmortem specimens obtained in 1977 and 1978. ALCOHOLS; DRUGS; AUTOPSIES; BLOOD; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS; ENZYMES	Poklis, A. Mackell, M.A. 1979
2228 Blood	Ingestion	GC	1	575.0-115.2 mg/dl	Not applicable	0 and 16 hr after admission 5 hr after consuming 30-60 ml vodka Clearance linear 18 mo old with overdose, Charity Hospital of Louisiana. Irritable, then comatose, no deep pain response, negative corneal reflex. Regained consciousness 10 hr after admission. ALCOHOLS; CHILDREN; ALCOHOLIC BEVERAGES; BLOOD; DRUGS; DRUG ABUSE; LOUISIANA	Ragan, F.A., Jr. Samuels, M.S. Hite, S.A. 1979

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Ethyl alcohol (8 CI)
Ethanol (9 CI)
64-17-5
C2-H6-O
MW 46.07, MP -117.3 C, BP 78.32 C, VP 40 mm Hg at 19 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2229 Blood	Ingestion	GC	1	0.8-0 mg/ml	Not applicable	1.5 and 8 hr after 0.6 g/kg as cocktail. Initial value, 0.2 mg/ml at 0.167 hr. No significant difference in sleep vs awake effects. Healthy adult. Social drinker (<50 g alcohol/wk). Fasted before and after dose. ALCOHOLS; AUSTRALIA; BLOOD; METABOLISM; COMPARATIVE EVALUATIONS; ADULTS; ALCOHOLIC BEVERAGES; ENZYMES	Madsen, B.W. Ponsi, L. 1980
2230 Blood, plasma	Ingestion		20	a) 12.8-9.3 mmol/l b) 13-9.8 mmol/l	a) Not given b) Not given	a) Means 40-160 min, 0.56 g/kg ethanol plus placebo b) Means 40-160 min, 0.56 g/kg ethanol, 1 mg clemastine Peak at 40 min. 35 male and 45 female healthy volunteers, ages 20-23 yr. No clemastine-ethanol synergism with single therapeutic doses of clemastine. DRUGS; DRUG THERAPY; SEDATIVES; ADULTS; AUSTRALIA; BLOOD PLASMA; NEUROLOGIC MANIFESTATIONS; PSYCHOTROPIC DRUGS; ALCOHOLIC BEVERAGES; COMPARATIVE EVALUATIONS	Franks, H.M. Hensley, V.R. Hensley, W.J. Starmer, G.A. Teo, R.K.C. 1979
2231 Blood, plasma	Ingestion	GC	6	10-380 mg/100 ml	Not given	6 of 11 patients admitted on 16 occasions after overdoses of chlormethiazole. 15-53 yr old patients Grade 2-4 coma in 5 cases, pneumonia in 1 case. DRUGS; HYPNOTICS; DRUG ABUSE; ALCOHOLS; BLOOD PLASMA; CASE HISTORIES; SCOTLAND	Illingworth, R.N. Stewart, M.J. Jarvie, D.R. 1979

Ethylene glycol (8 CI)
1,2-Ethanediol (9 CI)
107-21-1
C2-H6-O2
MW 62.1, BP 197.5 C, VP 0.05 mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2232 Blood, plasma	Ingestion		1	a) Not applicable b) Not applicable c) Not applicable	a) 1.8 g/l b) 179 mg/l c) 7 mg/l	a) 5 hr after ingestion b) 26 hr after ingestion and 4 hr of hemoperfusion with activated charcoal, 300 ml/min c) 38 hr after ingestion Gastric lavage and administration of ethanol (6.0 g/hr IV) were performed. 27-yr-old male ingested unknown amount of ethylene glycol. Pain in upper abdomen at admission. Full recovery. CASE HISTORIES; ALCOHOLS; LAVAGE; URINE; BLOOD PLASMA; ADULTS	Sangster, B. Prensen, J.A.C. de Groot, G. 1980
2233 Urine	Ingestion		1	Not applicable	9.36 g	Renal excretion during 7 hr of hemoperfusion, 300 ml/min, with activated charcoal, after ingestion of unknown dose. Excretion undetectable 1 day after dose. 27-yr-old male ingested unknown amount of ethylene glycol. Pain in upper abdomen at admission. Full recovery. CASE HISTORIES; ALCOHOLS; LAVAGE; URINE; BLOOD PLASMA; ADULTS	Sangster, B. Prensen, J.A.C. de Groot, G. 1980

Ethylene, trichloro- (8 CI)
Ethene, trichloro- (9 CI)
79-01-6
C2-H-Cl3
MW 131.40, MP 73 C, BP 87.1 C, VP 100 mm Hg at 32 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2234 Adipose						Review REVIEW; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; FOODS; CARCINOGEN; METABOLITES; ANESTHETICS; LIVER; ADIPOSE TISSUE; KIDNEYS; BRAIN	Waters, E.M. Gerstner, H.B. Huff, J.E. 1977
2235 Brain						Review REVIEW; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; FOODS; CARCINOGEN; METABOLITES; ANESTHETICS; LIVER; ADIPOSE TISSUE; KIDNEYS; BRAIN	Waters, E.M. Gerstner, H.B. Huff, J.E. 1977
2236 Kidney						Review REVIEW; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; FOODS; CARCINOGEN; METABOLITES; ANESTHETICS; LIVER; ADIPOSE TISSUE; KIDNEYS; BRAIN	Waters, E.M. Gerstner, H.B. Huff, J.E. 1977
2237 Liver						Review REVIEW; OCCUPATIONAL HAZARDS; POPULATION EXPOSURE; FOODS; CARCINOGEN; METABOLITES; ANESTHETICS; LIVER; ADIPOSE TISSUE; KIDNEYS; BRAIN	Waters, E.M. Gerstner, H.B. Huff, J.E. 1977

Ethylene, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethenyl)- (9 CI)
3424-82-6
C14-H8-Cl4
SS 318.03

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2238 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) <0.0001-0.0250 ppm b) <0.0001-0.0980 ppm c) 0.0070-0.2980 ppm d) <0.0001-0.0350 ppm e) <0.001-0.0795 ppm f) 0.0150-0.1818 ppm	a) 0.0090 ppm b) 0.0164 ppm c) 0.0532 ppm d) 0.0126 ppm e) 0.0231 ppm f) 0.0533 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Levels are for o,p'-DDT+o,p'-DDD Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2239 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0007-0.0300 ppm b) 0.0030-0.1564 ppm c) 0.0030-0.0690 ppm d) 0.0033-0.0309 ppm	a) 0.0078 ppm b) 0.0170 ppm c) 0.0135 ppm d) 0.0148 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djawaherian, M. 1974
2240 Blood, plasma		GC	29	Not given	0.0112 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2241 Milk		GC	29	Not given	0.0095 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977

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Ethylene, 1,1-dichloro-2-(o-chlorophenyl)-2-(p-chlorophenyl)- (8 CI)
Benzene, 1-chloro-2-(2,2-dichloro-1-(4-chlorophenyl)ethenyl)- (9 CI)
3424-82-6
C14-H8-Cl4
MW 318.03

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2282 Milk		GC TLC	30	1.6-83.8 ppb	18.02 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. FILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Fakken, A.F. Seip, H. 1976

Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2283 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) 0.0175-1.7410 ppm b) 0.0860-8.7655 ppm c) 2.1110-31.2810 ppm d) 0.0242-1.3131 ppm e) 0.1750-15.4900 ppm f) 3.0110-22.0310 ppm	a) 0.5329 ppm b) 2.2101 ppm c) 10.4486 ppm d) 0.3599 ppm e) 0.2578 ppm f) 3.5812 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
2284 Adipose		GC GC	168	0.058-15.538 ug/g	2.095 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HONACHLOR; HEXACHLOROCYCLOHEXANE; CHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, R.N. Davies, D.J.A. 1977
2285 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0096-7.8824 ppm b) 0.0756-5.3153 ppm c) 0.0972-8.0159 ppm d) 0.1220-5.0607 ppm	a) 1.2009 ppm b) 1.7115 ppm c) 1.6322 ppm d) 1.1505 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974
2286 Adipose		GC-EC	3	a) 1.81-2.50 ug/g wet wt b) 1.07-1.26 ug/g wet wt c) 1.48-1.83 ug/g wet wt	a) 2.26 ug/g wet wt b) 1.14 ug/g wet wt c) 1.64 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Tissue collected during autopsies on accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; PHTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Mes, J. Campbell, D.S. 1976

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloromethenylidene)bis[4-chloro- (9 CI)
72-55-9
C14-H8-Cl2
MW 318.02, MP 88.8 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2287 Adipose		GC-EC	a) 26 b) 19 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 16.50 ppm b) 22.52 ppm c) 17.12 ppm d) 17.55 ppm e) 19.35 ppm f) 13.31 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DIE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
2288 Adipose			268	Not given	2.80 ug/kg. Value is median.	Subcutaneous ventral fat from the Institutes for Pathological Anatomy and Forensic Medicine, 1971-1973. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Smokolay, A. Nosival, L. Uhnak, J. Fadaric, A. 1977
2289 Adipose		GC	73	a) Not given b) Not given	a) 1.58 ppm b) 2.15 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr, from Pori and Jyvaskyla, Finland PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Mattila, M.L. Ikkala, J. Inomaki, M. Maatta, K. Arstila, A.U. 1976
2250 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 3.1 ppm b) 1.8 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies. Highest levels in 22-45 yr olds b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Levels from other countries listed. Greenland noninduatrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DIT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.F. Clausen, J. 1979

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.6 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2251 Adipose			1	2.2-2.6 ppm	Not given	Concentration range 4-5% days after ingestion of 170.1 g 75% dichlofenthion. Suicide attempt by 62-yr-old male. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Hague, R. Morgade, C. Sonnenborn, H.H. Vaclavek, C. 1975
2252 Blood	Ingestion		a) 11 b) 1	a) Not given b) Not applicable	a) 225 ppb b) 3,256 ppb	a) Lifetime residents by river near defunct DDT-manufacturing facility b) Elderly male lifetime resident of same area levels 10 times those of general U.S. population. Fish from Huntsville Spring Branch area of the Tennessee River Basin. Residents of Triana, Alabama. DDT; DDE; PESTICIDES; METABOLITES; FISHES; FOODS; INDUSTRIAL POLLUTION; BLOOD; ALABAMA	Anon 1979
2253 Blood		GC	187	8.4-118 ppb	35.3 ppb	1975 Yugoslavia survey. Values are for serum or plasma. 65 males and 82 females, aged 8 to 92 yr (mean age 42 yr) in Croatia. HEXACHLOROCYCLOHEXANE; DDE; TDE; DDT; PESTICIDES; BLOOD SERUM; BLOOD PLASMA; YUGOSLAVIA; CHLORINATED HYDROCARBONS	Reiner, E. Krauthacker, B. Stipcevic, M. Stefanac, Z. 1977
2254 Blood		GC	a) 487 b) 497	a) 2-557 ppb b) Not given	a) 25 ppb b) 23 ppb	a) Samples in which p,p'-DDE was positively identified b) All Samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; TDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2255 Blood, plasma		GC	29	Not given	0.0195 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDI; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lewesch, C. 1977
2256 Blood, plasma		GC-EC	a) 23 b) 23 c) 18	a) Not given b) Not given c) Not given	a) 11.86 ug/l b) 10.91 ug/l c) 13.28 ug/l	a) Patients on hemodialysis for chronic renal failure, predialysis b) Patients on hemodialysis for chronic renal failure, postdialysis c) Controls Patients at Charity Hospital in New Orleans, Louisiana, and relatives of patients (controls) or workers at the unit (controls). PESTICIDES; BLOOD PLASMA; LOUISIANA; DDE; DDT; PENTACHLOROPHENOL	Pearson, J.E. Schultz, C.D. Rivers, J.E. Gonzalez, F.M. 1976
2257 Blood, serum		GC-EC	a) 88 b) 87 c) 46 d) 47 e) 187 f) 170	a) 16-209 ppb b) 9-82 ppb c) 14-116 ppb d) 7-28 ppb e) 5-95 ppb f) 5-105 ppb	a) 58.8 ppb b) 30.1 ppb c) 48.4 ppb d) 17.0 ppb e) 28.3 ppb f) 24.3 ppb	a) Males, households with one or more members in pesticide industry b) Females, households with one or more members in pesticide industry c) Males, farms where pesticides frequently used d) Females, farms where pesticides frequently used e) Controls (male) f) Controls (female) Mean household dust residues: 4.83 ppm (a-b), 3.28 ppm (c-d), and 4.37 ppm (e-f). Adult residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
2258 Blood, whole		GC GC	26	Not given	0.023 ppm	Occupationally exposed to DDT DDT; DDE; DDD; PESTICIDES; BLOOD; ADIPOSE TISSUE; CANADA; OCCUPATIONAL HAZARDS; AUTOPSIES; BIOACCUMULATION	Brown, J.R. Chow, L.Y. 1975

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2259 Brain		GC	41	a) Not given b) Not given	a) 0.07 ppm b) 0.66 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr from Pori, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Maatta, K. Arstila, A.U. 1976
2260 Liver		GC	73	a) Not given b) Not given	a) 0.15 ppm b) 2.22 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr, from Pori and Jyvaskyla, Finland PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Maatta, K. Arstila, A.U. 1976
2261 Milk			57	0.01-1.72 ppm	0.22 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
2262 Milk		GC	29	Not given	0.0217 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DEE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
2263 Milk		GC TLC	50	0.9-112.2 ppb	65.10 ppb	Milk samples, hospitals in urban Oslo. 8 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MF 98.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2264 Milk		GC	36 of 51	Not given	0.035 ppm	Random subjects of greater St. Louis, MO, metropoliton area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbrester, J. Kettelhut, L.L. Drucker, B. 1977
2265 Milk		GC	a) 23 b) 20 c) 12 d) 40 e) 38 f) 19 g) 20 h) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 2.8 ppm, fat basis b) 2.1 ppm, fat basis c) 4.1 ppm, fat basis d) 3.3 ppm, fat basis e) 3.8 ppm, fat basis f) 3.7 ppm, fat basis g) 3.9 ppm, fat basis h) 4.0 ppm, fat basis	a) 1970 b) 1971 c) 1972 d) 1973 e) 1974 f) 1975 g) 1976 h) 1977 Estimated from graph Mothers in Osaka Prefecture BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; JAPAN; MILK; POLYCHLORINATED BIPHENYLS	Yakushiji, T. Watanabe, I. Kuwabara, K. Yoshida, S. Mori, S. Fukushima, S. Kashimoto, T. Koyama, K. Kunita, N. 1979
2266 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-114 ng/g	a) 29 ng/g b) 34 ng/g c) 34 ng/g d) 21 ng/g e) 59 ng/g f) 35 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g Naitonal Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979
2267 Milk, fat				Not given	4497 mg/kg	95 samples-each is average from 20 mothers. Milk obtained from lactaria in Slovakia, 1971-1973. Values estimated from graph. PESTICIDES; MILK; FATS; CZECHOSLOVAKIA; HEXACHLOROCYCLOHEXANE; DDT; DDE; HEXACHLOROBENZENE	Szokolay, A. Bosival, L. Uhnak, J. Hadaric, A. 1977
2268 Milk, fat		GC	a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 2.0 mg/kg b) 1.7 mg/kg c) 1.9 mg/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974

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Ethylene, 1,1-dichloro-2,2-bis(p-chlorophenyl)- (8 CI)
Benzene, 1,1'-(dichloroethenylidene)bis(4-chloro- (9 CI)
72-55-9
C14-H8-Cl4
MW 318.02, MP 88.4 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2269 Milk, fat		GC-EC	a) 53 b) 33	a) 0.173-8.12 ppm b) 0.258-5.18 ppm	a) 2.23 ppm b) 1.09 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
2270 Milk, fat		GC-EC	a) 38 b) 6	a) 2.46-73.83 ppm b) 1.47-2.45 ppm	a) 14.67 ppm b) 1.920 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, H.W. D'Ercole, A.J. Cain, J.D. Arthur, H.B. 1979
2271 Milk, whole		GC-EC	22	0.015-0.112 ppm	0.061 ppm	Survey, Western Australia, 1970-1971 22 nursing mothers, wt 46-66 kg, living within a 30 mi radius of Perth, Western Australia MILK; PESTICIDES; AUSTRALIA; DDT; DDE; DIELDRIN; HEXACHLOROBENZENE	Stacey, C.I. Thomas, B.W. 1975
2272 Milk, whole		GC	a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 0.065 mg/kg b) 0.052 mg/kg c) 0.059 mg/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974

Ferritins
9007-73-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2273 Blood, serum			a) 5 b) 5	a) Not given b) Not given	a) 16 ng/dl b) 28 ng/dl	a) Women taking a combination oral contraceptive, after 35 days on diet b) Women not taking a contraceptive, after 35 days on diet Diet contained no Zn, Cu, Fe, but was otherwise nutritionally adequate. Some subjects: diarrhea, sore throat, stomatitis aphthous. ZINC; COPPER; METALS; NITROGEN; BLOOD SERUM; ORAL CONTRACEPTIVES; PROTEINS; METABOLISM	Hess, F.M. King, J.C. Margen, S. 1977a
2274 Blood, serum		RIA	15	a) 117-2270 ug/l b) 1120-5200 ug/l	a) 515.6 ug/l b) 2449.8 ug/l	a) 10 patients, 4-10 yr old b) 5 patients, 23-42 yr old Data also for Fe binding and absorption Progressive Fe loading with increasing age. Patients with full clinical picture of B-thalassaemia intermedia. 5 previously transfused with 2-15 units blood, 5 previously transfused with 25-88 units. METALS; TRACE ELEMENTS; IRON; BLOOD SERUM; COMPARATIVE EVALUATIONS; AGE; CHILDREN; ADULTS; URINE; BIOACCUMULATION; FECES; UNITED KINGDOM	Pippard, M.J. Warner, G.T. Callender, S.T. Weatherall, D.J. 1979

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2275 Blood	Inhalation		a) 14 b) 12 c) 3 d) 5 e) 13 f) 12 g) 12 h) 5	a) 0.8-26.5 uM b) 1.0-5.1 uM c) 1.6-3.3 uM d) 0.9-1.9 uM e) 2.3-485 uM f) 1.7-34.0 uM g) <0.3-96 uM h) 0.1-1.8 uM	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) Maternal levels near and to 47 hr after delivery, inorganic F b) Cord levels near and during delivery, inorganic F c) Infant 3-4 days old, inorganic F d) Maternal before treatment, inorganic F e) Maternal levels during and to 47 hr after delivery, organic F f) Cord levels during delivery, organic F g) Infants 2-14 days old, organic F h) Maternal levels before treatment, organic F Metabolite levels of methoxyflurane used as an analgesic or anesthetic during delivery. Patients at 2 Rochester, NY hospitals. DRUGS; FLUORINE COMPOUNDS; METABOLITES; BLOOD; MILK; INFANTS; NEW YORK; ADULTS	Fry, B.M. Taves, D.R. 1974
2276 Blood	Ingestion	Electrochem	1	Not applicable	1.6 ug/100 ml	Autopsy. Gastric contents contained 26 ug F/100 ml. 57-yr-old man found dead after ingesting an unknown quantity of rat poison. FLUORIDE; AUTOPSIES; BLOOD; URINE; MEASUREMENT METHODS	Speaker, J.H. 1976
2277 Blood, serum	Ingestion	Electrochem	1	18-0 ug/l	Not applicable	Change 6-72 hr after ingestion of unspecified amount of laundry powder containing Na2SF6. 2.5 yr old girl. Progressive vomiting & lethargy, comatose. Respiratory rate, 6-8 per min. Twitching, coarse horizontal nystagmus. Responsive 18 hr after admission. Severe hypocalcemia, ventricular arrhythmias, respiratory failure. FLUORIDE; CONNECTICUT; LAVAGE; HALOGENS; BLOOD SERUM; URINE	Tolken, R. Konecny, P. McCarthy, P. 1976
2278 Milk				2.1-15.5 ug/dl	Not given	Women in Birmingham, Bristol, Cardiff, Edinburgh, and Newcastle. SODIUM; FLUORINE; IODINE; METALS; MILK; UNITED KINGDOM	Anon 1977
2279 Milk	Inhalation		1	a) 2.8-7.8 uM b) 78.0-95.0 uM	a) Not given b) Not given	a) Inorganic F b) Organic F Levels 21.5-84.5 hr after methoxyflurane was given as anesthetic during labor. Patient at a Rochester, NY hospital DRUGS; FLUORINE COMPOUNDS; METABOLITES; BLOOD; MILK; INFANTS; NEW YORK; ADULTS	Fry, B.M. Taves, D.R. 1974

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2280 Teeth		AAS	35	970-3120 ppm	2160 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Soda, A. Aasenden, R. Bakhas, T. 1975
2281 Urine	Ingestion	Electrochem	1	Not applicable	32 mg/100 ml	Autopsy. Gastric contents contained 26 mg F/100 ml. 57-yr-old man found dead after ingesting an unknown quantity of rat poison. FLUORIDE; AUTOPSIES; BLOOD; URINE; MEASUREMENT METHODS	Speaker, J.N. 1976
2282 Urine	Ingestion	Electrochem	1	Not applicable	28.8 mg	72-hr urine excretion 2.5 yr old girl. Progressive vomiting & lethargy, comatose. Respiratory rate, 6-8 per min. Twitching, coarse horizontal nystagmus. Responsive 18 hr after admission. Severe hypocalcemia, ventricular arrhythmias, respiratory failure. FLUORIDE; CONNECTICUT; LAVAGE; HALOGENS; BLOOD SERUM; URINE	Volken, P. Konecny, P. McCarthy, P. 1976
2283 Urine		Electrochem	a) 6 b) 1 c) 30 d) 28	a) Not given b) Not given c) Not given d) Not given	a) 0.335 mg/l b) 0.127 mg/l c) 0.455 mg/l d) 0.681 mg/l	a) No fume fever episodes, <1 yr of work b) 1 or more fume fever episodes, <1 yr of work c) No fume fever episodes, >1 yr of work d) 1 or more fume fever episodes, >1 yr of work 60 workers chosen at random from exposed and unexposed groups with less than 1 to greater than 10 yr at a company fabricating polytetrafluoroethylene parts. Polymer fume fever: chills, body and joint pain, nausea, chest tightness, febrile response, lasting less than 48 hr. FLUORIDE; URINE; COMPARATIVE EVALUATIONS; OCCUPATIONAL HAZARDS	Polakoff, P.L. Busch, E.A. Okawa, M.T. 1974
2284 Urine	Inhalation	ISE	a) 26 b) 26	a) 0.230-2.729 ppm, range of means b) 0.067-1.430 ppm, range of means	a) Not given b) Not given	a) Delivery room personnel exposed to methoxyflurane/nitrous oxide anesthesia, day after exposure b) Delivery room personnel exposed only to nitrous oxide anesthesia, day after exposure FLUORIDE; ANESTHETICS; URINE; SWEDEN	Dahlgren, B.-E. 1979

Formamide, N-methyl-
123-39-7
C2-H5-N-O
MW 59.07, BP 180-185 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2285 Urine	Inhalation	GC	8	a) 3.81-5.90 ug/ml b) 665-873 ug c) 0.23-0.36 ug/ml d) 5.8-26.9 ug	a) 4.76 ug/ml b) 736.8 ug c) 0.28 ug/ml d) 11.6 ug	a) 7-hr end-of-exposure daily concentration b) 7-hr end-of-exposure daily total c) 24-hr daily concentration d) 24-hr daily total Subjects exposed to 8.79 ppm dimethylformamide vapor for 6 hr daily. 8 healthy males, 20-27 yr, 76-84 kg and 173-183 cm. URINE; POPULATION EXPOSURE; AIR POLLUTION; METABOLITES	Krivanek, N.D. McLaughlin, M. Fayerweather, W.E. 1978
2286 Urine		GC	100	Not given	0.8 ml/l	Normal levels MEASUREMENT METHODS; URINE	Barnes, J.R. Henry, N.W. 1974

Gentamicin
1403-66-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MP 102-108 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2287 Blood, serum	Injection		a) 5 b) 5 c) 5	a) Not given b) Not given c) Not given	a) 18.3 ug/ml b) 9.1 ug/ml c) 5.1 ug/ml	a) Peak, 2.5 min b) 10 min c) 60 min Healthy subjects. Rapid intravenous bolus injection. DRUGS; BLOOD SERUM; ANTIBIOTICS; NEW ZEALAND	Bailey, E.E. Lynn, K.L. 1974
2288 Blood, serum	Injection		10	a) Not given b) Not given c) Not given	a) 8.12 ug/ml b) 4.68 ug/ml c) 0.26 ug/ml	a) 5 min b) 30 min c) 8 hr After dose of 1 mg/kg. Patients undergoing minor surgery. DRUGS; ANTIBIOTICS; BLOOD SERUM	Van der Walle, J. Adriaensen, H. 1974
2289 Blood, serum	Injection		3	a) 6.5-7.8 ug/ml b) 2.6-4.1 ug/ml c) 1.8-2.4 ug/ml d) 0.2-0.5 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) 15 min b) 1 hr c) 2 hr d) 6 hr After 80 mg dose (1.05-1.4 mg/kg). Healthy males (57-76 kg) DRUGS; ANTIBIOTICS; BLOOD SERUM	George, R.H. Bint, A.J. Prangnell, D.F. 1974
2290 Blood, serum	Injection	RIA	a) 16 b) 19	a) 2.0-4.8 ug/ml b) 2.0-6.2 ug/ml	a) 3.77 + or - 0.8 ug/ml b) 3.89 + or - 1.1 ug/ml	a) Day 1. Peaks after 37.5 mg/sq m every 6 hr b) Day 1. Peaks after 1.25 mg/kg every 6 hr Peaks increased 10% by day 6. Children 26-210 months of age with cancer, being treated for suspected gram-negative bacillary infection. ANTIBIOTICS; CHILDREN; TENNESSEE; DRUGS; DRUG THERAPY; BLOOD SERUM; INFECTION	Evans, W.E. Feldman, S. Omni, M. Taylor, R.H. Chaudhary, S. Melton, E.T. Barker, L.F. 1976
2291 Blood, serum	Injection	Enzymatic	58	2.8-8.0 ug/ml	Not given	Range of peaks after 30-min IV of 60 mg/sq m. Dosage, based on body surface area rather than weight, resulted in therapeutic peak concentrations at all ages. Oncology patients, ages 8 mo-73 yr studied 1-4 days after start of treatment. Finimal toxicity: transient increase in serum creatinine ANTIBIOTICS; MASSACHUSETTS; DRUGS; DRUG THERAPY; BLOOD SERUM; INFECTION	Siber, G.R. Smith, A.L. Levin, M.J. 1979
2292 Blood, serum	Injection	Immunodiffusion	5	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 10.3 ug/ml b) 9.0 ug/ml c) 3.5 ug/ml d) 9.4 ug/ml e) 5.2 ug/ml f) 0.07 ug/ml	a) Time = 5 min b) Time = 10 min c) Time = 60 min d) Time = 5 min e) Time = 10 min f) Time = 60 min After 80 mg dose (a-c) or 1 mg/kg dose (d-f). Healthy adults (2 female, 3 male) aged 21-55 yr and wt 50-85 kg. DRUGS; ANTIBIOTICS; BLOOD SERUM	Stratford, B.C. Dixson, S. Colcroft, A.J. 1974

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Gentamicin
1403-66-3
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MP 102-108 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2293 Blood, serum	Injection	Microbiological	9	a) 3.54-7.20 ug/ml b) 2.80-7.50 ug/ml	a) 5.40 ug/ml b) 4.86 ug/ml	a) Thigh injection b) Buttock injection Peaks (at 30 min) after 80-mg dose. 9 male and 1 female volunteers. DRUGS; ANTIBIOTICS; BLOOD SERUM; URINE; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Reeves, D.S. Bywater, M.J. Wise, R. Whitmarsh, V.B. 1974
2294 Urine	Injection	Microbiological	9	a) 37-67 mg b) 41-66 mg	a) 53 mg b) 54 mg	a) Thigh injection b) Buttock injection 6-hr excretion after 500-mg dose. 8 male and 1 female volunteers. DRUGS; ANTIBIOTICS; BLOOD SERUM; URINE; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Reeves, D.S. Bywater, M.J. Wise, R. Whitmarsh, V.B. 1974

Gentamycin, sulfate (salt) (5 CI)
Gentasicin, sulfate (salt) (5 CI)
1405-41-0
H2-OH-5,Y-UNKNOWN
MP 218-237 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2295 Blood, serum		Microbiological	a) 87 b) 17	a) 1.8-8.7 ug/ml b) 1.8-9.5 ug/ml	a) Not given b) Not given	a) Treatment lasted 10.5 days b) Treatment lasted 11 days average total dose 2 g. Patients in group (b) had significantly higher serum and ;redicted tissue levels. Hospitalized patients (average age 65) suffering severe infections, usually complicating another condition (major surgery, chronic cardiorespiratory disease, or diabetes). All patients in group (b) exhibited nephrotoxic effects. DRUGS; ANTIBIOTICS; BLOOD SERUM; BIOACCUMULATION; INFECTION	Schentag, J.J. Cumbo, T.J. Jusko, W.J. Plaut, M.E. 1978

Germanium
7440-56-4
Ge
At# 72.59, MP 937.2 C, BP 2700 C, VP 10 mm Hg at 2080 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2296 Lung		ES	30	Not detectable-1.9 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolovicz, F.R. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967

Glucitol, 1,4:3,6-dianhydro-, dinitrate, D- (8 CI)
D-Glucitol, 1,4:3,6-dianhydro-, dinitrate (8 CI)
87-33-2
C6-H8-N2-O8
MW 236.14, MP 70 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2297 Blood, plasma	Ingestion Dermal	GC	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 2.8 ng/ml b) 15.9 ng/ml c) 3.2 ng/ml d) 1.4 ng/ml e) 3.5 ng/ml f) 6.2 ng/ml g) 1.0 ng/ml	a) 5 min after sublingual dose b) 30 min after sublingual dose c) 2 hr after sublingual dose d) 30 min after ointment application e) 2 hr after ointment application f) 6 hr after ointment application g) 32 hr after ointment application Healthy adult males, 19-26 yr, weighing 62-88 kg. DRUGS; NITRATES; BLOOD PLASMA; SKIN; COMPARATIVE EVALUATIONS; ADULTS	Hansel-Jones, D. Taylor, T. Doyle, E. Chasseaud, L.F. Darragh, A. O'Kelly, D.A. Over, H. 1978
2298 Blood, plasma	Ingestion	GC-EC	2	a) Not given b) Not given c) Not given	a) 38 ng/ml b) 26.5 ng/ml c) 57.0 ng/ml	a) Peak isosorbide dinitrate, 30 min after 5-mg dose b) Peak isosorbide 2-mononitrate (metabolite), 30 min after 5-mg dose c) Peak isosorbide 5-mononitrate (metabolite), 30 min after 5-mg dose DRUGS; BLOOD PLASMA; METABOLITES; IN VIVO ANALYSIS; IN VITRO ANALYSIS; DOGS; COMPARATIVE EVALUATIONS; NEW YORK	Chin, D.A. Prue, D.G. Michelucci, J. Kho, B.T. Warner, C.R. 1977

Glutamic acid, N-[p-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, L-(+)- (8 CI)
L-Glutamic acid, N-(4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]- (9 CI)
59-05-2
C20-H22-N8-O5
MW 454.44, MP 195 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2299 Blood, serum	Injection	RIA	12	a) 1x10(E-4)-3x10(E-8) moles/l b) 2x10(E-4)-2.5x10(E-7) moles/l c) 5x10(E-5)-2x10(E-7) moles/l	a) Not given b) Not given c) Not given	a) Methotrexate hr 1-24, plus thymidine hr 24-72 b) Methotrexate hr 1-24, plus low-dose leucovorin hr 24-48 c) Methotrexate hr 1-24, plus high-dose leucovorin > or = 24 hr Range of means, 1 and 72 hr after methotrexate, 3.375 g/sq m. Patients with advanced cancer. No methotrexate toxicity DRUGS; DRUG THERAPY; BLOOD SERUM; CHEMOTHERAPY; COMPARATIVE EVALUATIONS; DISEASES; RETICULOENDOTHELIAL SYSTEM; UNITED STATES	Howell, S.B. Krishan, A. Frei, E., III 1979
2300 Blood, serum	Injection	Competitive protein binding	1	a) 420-0.0064 ug/ml b) 560-0.3 ug/ml	a) Not applicable b) Not applicable	a) Without pleural effusion b) With pleural effusion Range 0 and 96 hr after two 6-hr infusions of 400 mg/kg. Continuous biexponential decline. 12-yr-old with metastatic osteosarcoma. DRUGS; CHEMOTHERAPY; NEOPLASMS; CHILDREN; TENNESSEE; BLOOD SERUM; PLEURAL FLUID; OSTEOSARCOMAS	Evans, W.E. Pratt, C.B. 1978
2301 Pleural fluid	Injection	Competitive protein binding	1	250-25 ug/ml	Not applicable	Range 12 and 48 hr after two 6-hr infusion of 400 mg/kg. Level about 10 times higher than serum level. 12-yr-old with metastatic osteosarcoma. DRUGS; CHEMOTHERAPY; NEOPLASMS; CHILDREN; TENNESSEE; BLOOD SERUM; PLEURAL FLUID; OSTEOSARCOMAS	Evans, W.E. Pratt, C.B. 1978

Glutarimide, 2-ethyl-2-phenyl- (8 CI)
2,6-Piperidinedione, 3-ethyl-3-phenyl- (8 CI)
77-21-4
C13-H15-N-02
MW 217.26, MP dl form 94 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2302 Blood	Ingestion	GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 1.6 mg % b) 1.2 mg % c) 4.0 mg % d) 1.8 mg %	a) Glutethimide, 8 hr pre-dialysis b) Glutethimide, 10 hr post-dialysis c) Active metabolite, 4-hydroxy-2-ethyl-2-phenylglutarimide, 8 hr pre-dialysis d) Active metabolite, 4-hydroxy-2-ethyl-2-phenylglutarimide, 10 hr post-dialysis Estimated from graph. Patient admitted to hospital with drug overdose in Nashville, Tennessee. Coma, diminishing respiratory effort, negligible deep tendon reflexes and response to pain. DRUGS; DRUG ABUSE; SEDATIVES; HYPNOTICS; BLOOD; METABOLITES; TENNESSEE	Evans, M.A. Hies, A.S. Watson, J.T. Harbison, R.D. 1977
2303 Blood			13	2.0-140.0 ug/ml	31.0 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2304 Blood, plasma	Ingestion	Rieder method	63	2.0-63.0 ug/ml	20.1 ug/ml	Average quantity ingested 7.7 g. Mean age 34 yr, age range 15-84 yr. Hypotension, respiratory failure or infection, impairment of temperature regulation, coma, CNS depression. Dose, plasma level, coingestion of barbiturates determined severity of coma. 6 fatal cases (5 had coingestion) included 3 > 60 yrs old. AGE; BLOOD PLASMA; HYPNOTICS; DRUG ABUSE; MASSACHUSETTS; DRUGS	Greenblatt, D.J. Allen, M.D. Harmatz, J.S. Woel, E.J. Shader, R.I. 1979

Glyoxylic acid, phenyl- (8 CI)
Benzeneacetic acid, alpha-oxo- (9 CI)
611-73-4
C8-H6-O3
MW 150.14, MP 66 C, BP 147-151 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2305 Urine	Inhalation Ingestion Dermal	Fluorometry	8	a) 78.5-104 ug/ml b) 112.5-162.5 ug/ml c) 0-40 ug/ml d) 0-71.5 ug/ml	a) 96 ug/ml b) 138.2 ug/ml c) 10.5 + or - 9.8 ug/ml d) 19.5 + or - 17.2 ug/ml	a) Day 1 of styrene exposure, 4 workers b) Second consecutive day of styrene exposure, 4 workers c) Day 1, 4 control workers d) Day 2, 4 control workers 8 workers in polyester plastics plant, 4 exposed to styrene. MEASUREMENT METHODS; URINE; CANADA; ADULTS; OCCUPATIONAL HAZARDS; STYRENES; METABOLITES; AIR POLLUTION; HEALTH HAZARDS	Chakrabarti, S.K. 1979

Gold
7440-57-5
Au
AtW 196.9665, MP 1064.76 C, BP 2700 C, VP 1 mm Hg at 1869 C, 10 mm Hg at 2160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2306 Blood, serum			1	a) Not applicable b) Not applicable	a) 62 ug/dl b) 20 ug/dl	a) Before dimercaprol b) After dimercaprol 76 yr old man treated with gold sodium thiomalate. Epistaxis, ecchymoses and petechiae. Thrombocytopenia GOLD; METALS; CHEMOTHERAPY; DRUGS; BLOOD SERUM; CALIFORNIA	Stafford, B.T. Crosby, W.H. 1978
2307 Hair		NA	11	1.500-2.895 ppm	2.080 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977

Guanidine, ((2,6-dichlorobenzylidene)amino)- (8 CI)
Hydrazinecarboximidamide, 2-((2,6-dichlorophenyl)methylene)- (9 CI)
5051-62-7
C8-H8-Cl2-N4
MW 231.10

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2308 Blood, plasma	Ingestion	Radiometry GC TLC	8	a) Not given b) Not given c) 1.2-5.2 ng/ml d) 2.5-3.1 ng/ml	a) 160 + or - 15 ng drug equivalents/ml b) 814 + or - 85 ng drug equivalents/ml c) 2.5 + or - 1.8 ng/ml d) 2.9 + or - 0.3 ng/ml	a) Mean peak, 3-4 hr after 16-mg dose, calculated from total radioactivity b) Mean peak, 3-4 hr after 32-mg dose, calculated from total radioactivity c) Peaks after 16 mg, as unchanged drug. Peak time, 3.8 hr d) Peaks after 32 mg, as unchanged drug. Peak time, 2.8 hr After 14-C labelled doses. Patients, ages 44-72 yr, with essential hypertension, fasted before and after dose. Lowered blood pressure, mild sedation. DRUGS; DRUG THERAPY; CHLORINE ORGANIC COMPOUNDS; BLOOD PLASMA; HYPERTENSION; URINE; FECES; BLOOD PRESSURE	Meacham, E.H. Emmett, M. Kyriakopoulos, A.A. Chiang, S.T. Buelius, H.W. Walker, B.R. Marins, R.G. Goldberg, M. 1980
2309 Urine	Ingestion	Radiometry GC TLC	8	a) 157 ug b) 222 ug c) 76.7-79.7% of dose	a) Not applicable b) Not applicable	a) Unchanged drug in 160-hr urines, after 16-mg dose (capsules) b) Unchanged drug in 160-hr urines after 32-mg dose c) 14C in cumulative 160-hr urines. Patients, ages 44-72 yr, with essential hypertension, fasted before and after dose. Lowered blood pressure, mild sedation. DRUGS; DRUG THERAPY; CHLORINE ORGANIC COMPOUNDS; BLOOD PLASMA; HYPERTENSION; URINE; FECES; BLOOD PRESSURE	Meacham, E.H. Emmett, M. Kyriakopoulos, A.A. Chiang, S.T. Buelius, H.W. Walker, B.R. Marins, R.G. Goldberg, M. 1980

Guanidine, N-cyano-N'-methyl-N''-(2-(((5-methyl-1H-imidazol-4-yl)methyl)thio)ethyl)-
51481-61-9
C10-H16-N6-S
MW 252.34, MP 141-143 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2310 Blood	Ingestion	HPLC	1	19.7-2.60 mg/l	Not applicable	Change from 0-15 hr after ingestion. 35 yr old was admitted to hospital in the Netherlands after deliberate overdose of cimetidine and oxazepam. Unconscious, shaking in the extremities at admission, conscious 6 hr after forced diuresis. DRUGS; DRUG ABUSE; METHEPLAMES; LAVAGE; BLOOD; DIAZEPAMS; PSYCHOTROPIC DRUGS	van Rifthoven, A.W.A.M. 1979

Guanidine, 1-benzyl-2,3-diethyl- (8 CI)
Guanidine, N,N'-dimethyl-N''-(phenylethyl)- (9 CI)
55-73-2
C10-815-83
BB 177.28, BP 195-197 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	MEAN	GENERAL INFORMATION	REFERENCE
2311 Blood, plasma	Ingestion	Fluorometry	12	a) 0.5 uM b) 0.65 uM c) Not given	a) Steady state, d 2 of therapy with mean daily dose 60.8 mg b) 11 patients after 2-12 mo therapy with 79 mg/d c) 6 patients during day 2 after end of chronic therapy, range of means from graph Correlation between plasma level and cumulative daily dose. Subjects having essential hypertension for mean duration of 7.7 YR. Mild, persistent fatigue (particularly with exercise), soft stools, and dizziness when rapidly assuming upright posture. DRUGS; DRUG THERAPY; BLOOD PRESSURE; HYPERTENSION; BLOOD PLASMA; PHENYLVANIA	Corder, C.N. 1978

Hexachlorobenzol (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2312 911R		GC TLC	a) 50 b) 15 c) 6	a) 1.7-69.5 ppb b) Not given c) Not given	a) 9.7 ppb b) 9.7 ppb c) 10.0 ppb	a) All samples b) Colostrum c) 9-16 wk after birth of infant Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Skrip, H. 1974

Hipparic acid (8 CI)
Glycine, N-benzoyl- (9 CI)
495-69-2
C9-H9-N-O3
MW 179.17, Bi 187-188 C

TISSUE	EXPOSURE MOUTH	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2313 Urine		Fluorometry	a) 10, b) 10	a) Not given b) Not given	a) 0.72 + or - 0.31 g/l b) 2.34 + or - 0.39 g/l	a) Not exposed b) Exposed to toluene, average level 200 ppm, 2 wk study Toluene in air and metabolite in urine not linear Urine not corrected for density, methanol also in atmosphere. METABOLISM; METABOLITES; URINE; COMPARATIVE EVALUATIONS; INDUSTRIAL ATMOSPHERES; MEASUREMENT METHODS; GERMANY	Woiwode, W. Vodarz, R. Drysch, K. Weichardt, H. 1979

Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
MW 252.26, MP 295-298 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2314 Blood, plasma	Ingestion		1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 52 ug/ml b) 65 ug/ml c) 35 ug/ml d) 3 ug/ml	a) 8 hr after ingestion b) 72 hr after ingestion-peak c) 6 days after ingestion d) 13 days after ingestion 1,500 mg dose in tablet form. Female, aged 6 yr, admitted to Vanderbilt Children's Hospital. Symptoms noted during analysis: stupor with response only to deep pain, spontaneous and repetitive opisthotonic posturing and intermittent disconjugate position of eyes, generalized tonic spasms, apnea, coma, lethargy, irregular respiratory patterns, tremors, and nystagmus. Normal neurologic examination after 14 days. Acute phenytoin overdose DRUGS; BLOOD PLASMA; CASE HISTORIES; CHILDREN; TENNESSEE	Wilson, J.T. Huff, J.G. Filroy, A.M. 1970
2315 Blood, plasma		GC	a) and c) 6 b) and d) 1	a) 8.8-39.2 umol/l b) Not applicable c) 0.8-6.2 umol/l d) Not applicable	a) 17.49 umol/l b) 2.8 umol/l c) 2.87 umol/l d) 0.4 umol/l	a) Patients with chronic renal failure, measured as total plasma b) Patient with renal transplant, measured as total plasma c) Patients with chronic renal failure, measured as free plasma d) Patient with renal transplant, measured as free plasma Doses of 200-500 mg/day Renal patients aged 20 to 58 yr. 6 had hemodialysis for 2 wk to 55 mo. 1 had chronic rejection 5 yr after renal transplant. DRUGS; NERVOUS SYSTEM DISEASES; DRUG THERAPY; BLOOD PLASMA; SALIVA; UNITED KINGDOM	Reynolds, F. Jones, E.F. Ziroyanis, P.N. Smith, S.E. 1976
2316 Blood, plasma	Ingestion	GC	10	1.2-20.8 mg/ml	9.94 mg/ml	Doses varied from 150-400 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, P.H. Davidson, S. Falconer, M.A. Brockenridge, A. 1974

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Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
MW 252.26, MP 295-298 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2317 Blood, plasma	Injection Ingestion	GC	7	a) Not given b) Not given c) 4.6-7.9 ug/ml d) 6.9-2.6 ug/ml	a) 52 ug/ml b) 26 ug/ml c) Not given d) Not given	a) Mother, after regimen of 4.6 mg/kg/day, oral b) Mother, after regimen of 3.0 mg/kg/day, oral c) 3 children, 0.5 and 24 hr after 5 mg/kg IV, single dose d) Mother and 3 adult family members, 0.5 and 24 hr after 5 mg/kg IV, single dose c) and d) estimated from graph. Data available for half-lives of subjects and unrelated drug-free epileptics. 32 yr old epileptic mother, a hypometabolizer, and her available kinship. Toxicity at 4.6 and 3.0 mg/kg/day, oral. Symptoms: slow mentation, poor memory, mild ataxia, inconsistent nystagmus. DRUGS; DRUG THERAPY; GENETIC EFFECTS; BLOOD PLASMA; URINE; PSYCHOTROPIC DRUGS; ANTICONVULSANTS; TEGRETOL; COMPARATIVE EVALUATIONS	Vasko, M.R. Bell, R.D. Daly, D.D. Pippenger, C.E. 1980
2318 Blood, serum		GC	1	a) Not applicable b) Not applicable	a) 13.5 ug/ml b) 8.5 ug/ml	a) 2 mo after start of 300 mg/day b) 14 mo later, now taking 450 mg/day At each dose level, concentration in blood decreased with time. Optimal levels decreased frequency of attacks better than suboptimal levels. Values estimated from graph. More data available. Patients at the neurological clinic at King's College Hospital. ANTICONVULSANTS; DIPHENYLHYDANTOINS; BLOOD SERUM; DRUGS; UNITED KINGDOM; NERVOUS SYSTEM DISEASES	Reynolds, E.H. Chadwick, D. Galbraith, A.W. 1976
2319 Blood, serum	Ingestion		1	a) >200 umol/l b) 71 umol/l c) 30 umol/l	a) Not applicable b) Not applicable c) Not applicable	a) After several yr of 100 mg twice a day followed by several wk of 3 or 4 doses a day b) Level 7 days after ceasing treatment c) Level 2 mo after resuming 100 mg twice a day 19 yr old epileptic. Admitted to hospital with marked spasticity and ataxia. Other symptoms included diplopia, nystagmus, hyperflexia and clonus. DRUGS; DRUG THERAPY; BLOOD SERUM; NEUROLOGIC MANIFESTATIONS; AUSTRALIA	Stark, R.J. 1979

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Hydantoin, 5,5-diphenyl- (9 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-O2
RN 252.26, RP 295-298 C

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TISSUE	RESPONSE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2320 Blood, serum	Ingestion		1	Not given	<3 ug/ml	100 or 200 mg t.i.d. over extended period. Level below the therapeutic range of 10-20 ug/ml. 27-yr-old woman with petit mal, focal motor seizures, and occasional grand mal first seen at 13 wk gestation. Infant delivered at 39 wk. CERSON; DRUGS; DRUG THERAPY; PLACENTA; FETUS; MILK; NEWBORN; INFANTS; NEUROMUSCULAR DISEASES; BLOOD; BLOOD SERUM; ANTICONVULSANTS; LACTATION; UMBILICAL CORD	Dickinson, R.G. Harland, R.C. Lynn, R.B. Smith, D. Gerber, N. 1979
2321 Blood, serum	Injection	GC RIA	1	2.7-2.9 ug/l	Not given	Typical change, 0.16 and 56 hr after 3.6 mg/kg, estimated from graph. Biexponential decline from 0. Healthy volunteer ANTICONVULSANTS; BLOOD SERUM; SEX FACTORS; SEX; THIOCYANATES; SMOKING; COMPARATIVE EVALUATIONS; DRUGS; DRUG THERAPY; PROTEINS; TOBACCOS; ADULTS	Pono, J.Q. Barros, S.A. Junko, W.J. 1978
2322 Blood, serum	Ingestion	GC	4	1-18 ug/ml	Not given	Predose values, 200-600 mg/day, single or twice daily doses. 3 healthy males, 20-35 yr, and 1 male, 38 yr, with grand mal seizures. DRUGS; ANTICONVULSANTS; BLOOD SERUM; BIOACCUMULATION; METABOLISM; ADULTS; NERVOUS SYSTEM DISEASES	Allen, J.P. Ludden, T.M. Purrow, S.H. Clementi, W.A. Starchansky, S.A. 1979
2323 Blood, serum		GC	6	a) 30-35 umoles/l b) 28-29 umoles/l	a) Not given b) Not given	a) 24 hr range of means, control day, following 3 wk regimen of 150-400 mg/day in 2 doses. 89.0-91.6% protein-bound b) 24 hr range of means, dose as in a) plus 800 mg sodium valproate after first dose. 86.5-90.0% phenytoin protein-bound at sodium valproate levels of 300 umoles/l. 21-39 yr olds with chronic epilepsy. DRUGS; DRUG THERAPY; ANTICONVULSANTS; ADULTS; UNITED KINGDOM; BLOOD SERUM; DRUG INTERACTION; NERVOUS SYSTEM DISEASES; DISEASES	Monks, A. Richens, A. 1980
2324 Brain	Ingestion	GC	11	1.0-16.2 ug/g	5.9 ug/g	Doses varied from 150-400 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, F.H. Davidson, S. Falconer, M.A. Breckenridge, A. 1978
2325 Cerebrospinal fluid	Ingestion	GC	10	<0.5-3.9 ug/ml	1.33 ug/ml	Doses varied from 150-400 mg/day. Epilepsy patients, 13-38 yr old. ANTICONVULSANTS; BLOOD; BLOOD PLASMA; DIPHENYLHYDANTOINS; DRUG THERAPY; BRAIN; SPINAL FLUID	Vajda, F. Williams, F.H. Davidson, S. Falconer, M.A. Breckenridge, A. 1978

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Hydantoin, 5,5-diphenyl- (8 CI)
2,4-Imidazolidinedione, 5,5-diphenyl- (9 CI)
57-41-0
C15-H12-N2-02
NN 252.26, NP 295-298 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2326 Saliva		GC	a) 6 b) 1 c) 17	a) 1.0-6.8 umol/l b) Not applicable c) 1.2-20.3 umol/l	a) 2.75 umol/l b) 0.5 umol/l c) Not given	a) Patients with chronic renal failure b) Patient with renal transplant c) Epileptic patients Renal patients received 200-500 mg/day. Epileptic patients received 90-400 mg/day. Saliva samples stimulated by citric acid. Renal patients aged 20 to 58 yr. 6 had hemodialysis treatment for 2 wk to 55 month. 1 had chronic rejection 5 yr after renal transplant. Epileptic patients, 8 female, 9 male, 3 to 55 yr old. DRUGS; NERVOUS SYSTEM DISEASES; KIDNEYS; DRUG THERAPY; BLOOD PLASMA; SALIVA; UNITED KINGDOM	Reynolds, F. Jones, M.F. Kiroyanis, P.N. Smith, S.E. 1976
2327 Urine	Injection	GC	6	a) 8.0-28.6% of dose b) 19.2-55.8% of dose	a) 15.2% of dose b) 34.17% of dose	a) 72 hr b) 24 hr Cumulative excretions of p-hydroxyphenyl metabolite in 6 family members, including the mother. 32 yr old epileptic mother, a hypometabolizer, and her available kinship. Toxicity at 4.6 and 3.0 mg/kg/day, oral. Symptoms: slow mentation, poor memory, mild ataxia, inconsistent nystagmus. DRUGS; DRUG THERAPY; GENETIC EFFECTS; BLOOD PLASMA; URINE; PSYCHOTROPIC DRUGS; ANTICONVULSANTS; TEXAS; COMPARATIVE EVALUATIONS	Yanko, M.B. Bell, R.D. Daly, D.D. Pippenger, C.E. 1980

Hydratropic acid, m-benzoyl- (9 CI)
Benzeneacetic acid, 3-benzoyl-alpha-methyl- (9 CI)
22071-15-4
C16-H14-O3
MW 254.29, 95 98 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2328 Urine		HPLC	a) 1 b) 1 c) 1	a) Not applicable b) Not applicable	a) 29.1% b) 30.3%	a) Ketoprofen b) Glucuronide metabolite % of 300-mg/day dose in 24-hr urine. Rheumatoid arthritis patient. DRUGS; DRUG THERAPY; UNITED KINGDOM; MEASUREMENT METHODS; URINE; METABOLITES	Jefferies, T.M. Thomas, W.O.A. Parfitt, K.T. 1979

Hydratropic acid, p-isobutyl- (8 CI)
Benzeneacetic acid, alpha-methyl-4-(2-methylpropyl)- (9 CI)
15687-27-1
C13-H18-O2
HW 206.27, HP 75-77 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2329 Blood, serum	Ingestion	GC	18	1-75 ug/ml	Not given	Low and peak values, 0 and 1 hr of 4 hr study. Dose, 400 mg/6 hr. Large variations between patients. Patients, ages 44-70 yr, with rheumatoid arthritis 3-22 yr. DRUGS; DRUG THERAPY; ANTI-INFLAMMATORY AGENTS; ANALGESICS; ADULTS; NEW ZEALAND; BLOOD SERUM; COMPARATIVE EVALUATIONS	McArthur, A.W. Perry, D.G. Palmer, D.G. 1979

Hydratropic acid, 3-chloro-2-(3-pyrrolin-1-yl)- (8 CI)
Benzeneacetic acid, 3-chloro-4-(2,5-dihydro-1H-pyrrol-1-yl)-alpha-methyl- (9 CI)
31793-07-4
C13-H14-Cl-N-O2
MW 251.73

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2330 Blood, plasma	Ingestion		3	a) 8-0.1 ug/ml b) 5-0.08 ug/ml	a) Not applicable b) Not applicable	Peak (1.5-2 hr) to 30 hr after administration a) Single dose of 100 mg b) Single dose of 50 mg Normal males, 22-37 yr age Drug is nonsteroidal, and does not have endocrine effects. Gastrointestinal ulceration possible hazard with high dosages. ANTI-INFLAMMATORY AGENTS; ANALGESICS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; DRUG THERAPY	Proctor, J.D. Evans, E.F. Campos, V. Velandia, J. Pollack, D. Wingfield, W.L. Wasserman, A.J. 1974

Imidazole-1-ethanol, alpha-(chloromethyl)-2-methyl-5-nitro- (8 CI)
1H-Imidazole-1-ethanol, alpha-(chloromethyl)-2-methyl-5-nitro- (9 CI)
16773-42-5
C7-H10-Cl-N3-O3
MW 219.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2331 Urine	Ingestion		3	43-63%	53%	% of dose excreted during 2 days after 10 mg ornidazole/kg. < 4% excreted unchanged, remainder as free and conjugated metabolites 5 metabolites identified. Other data available. Adults DRUGS; DRUG THERAPY; METABOLISM; URINE; DOGS; COMPARATIVE EVALUATIONS; SWITZERLAND	Schwartz, D.E. Jordan, J.-C. Vetter, W. Oesterhelt, G. 1979

Indicine (8 CI)
Butanoic acid, 2,3-dihydroxy-2-(1-methylethyl)-, (2,3,5,7a-tetrahydro-1-hydroxy-1H-pyrrolizin-7-yl)methyl ester, (1R-(1alpha,7(2R*,3S*),7abeta))- (9 CI)
480-82-0
C15-H25-N-05
MW 299.41

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2332 Blood, plasma	Injection	GC-EC		Not given	10 ug/ml	Peak value at 1-4 hr after 3.0 g/sq m indicine N-oxide Patients, 31-78 yr old, with advanced carcinoma. Reversible leukopenia and/or thrombocytopenia, myelosuppression, hemopoietic toxicity, mild nausea, vomiting. Mild hepatotoxicity. DRUGS; DRUG THERAPY; NEOPLASMS; ALKALOIDS; BLOOD PLASMA; URINE; CHEMOTHERAPY; CARCINOMAS	Kovach, J.S. Ames, M.M. Powis, G. Moertel, C.G. Hahn, R.G. Creagan, E.T. 1979
2333 Urine	Injection	GC-EC		>0-120 mg	Not given	24-hr urines, 750-5700 mg indicine N-oxide doses. Excretion related to dose, r=0.80 (P<0.05). Estimated from graph. Patients, 31-78 yr old, with advanced carcinoma. Reversible leukopenia and/or thrombocytopenia, myelosuppression, hemopoietic toxicity, mild nausea, vomiting. Mild hepatotoxicity. DRUGS; DRUG THERAPY; NEOPLASMS; ALKALOIDS; BLOOD PLASMA; URINE; CHEMOTHERAPY; CARCINOMAS	Kovach, J.S. Ames, M.M. Powis, G. Moertel, C.G. Hahn, R.G. Creagan, E.T. 1979

Indole-3-acetic acid, 1-(p-chlorobenzoyl)-5-methoxy-2-methyl- (8 CI)
1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl- (9 CI)
53-86-1
C19-H16-Cl-N-O4
MW 357.81, MP different forms 155 C, 162 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2334 Blood, plasma	Ingestion	GC-EC	17	a) Not given b) Not given c) Not given d) Not given	a) 590 ng/ml b) 190 ng/ml c) 800 ng/ml d) 365 ng/ml	a) 3 hr. after 25 mg b) 8 hr after 25 mg c) 3 hr after 25 mg plus probenecid d) 8 hr after 25 mg plus probenecid Values estimated from graph. Levels after 3 wk of treatment with 25 mg indomethacin every 8 hr. Probenecid (0.5 gm) twice daily. Area under plasma concentration time curve increased from 2,553 hr ng/ml to 4,181 hr ng/ml with probenecid. Pharmacokinetic and other data available. 6 men, 11 women with rheumatoid arthritis, 29-64 yr old. DRUGS; DRUG THERAPY; RHEUMATOID ARTHRITIS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; UNITED KINGDOM	Baber, N. Halliday, L. Sibeon, R. Littler, T. Orme, M.L'E. 1978
2335 Blood, plasma	Nasogastric	GC	9	0.027-0.310 ug/ml	0.078 ug/ml	Peaks after 2 or 3 doses of 0.10-0.30 mg/kg body wt. Doses at 8 hr intervals. Premature infants with mean birth wt of 1,498 g and mean gestational period of 32.2 wk, University of Illinois Hospital. DRUGS; BLOOD PLASMA; DRUG THERAPY; LUNGS; INFANTS; ILLINOIS	Bhat, R. Vidyasagar, D. Vadapalli, M. Whalley, C. Fisher, E. Hantreiter, A. Evans, M. 1979
2336 Blood, plasma	Injection	GC-EC	1	0.68-0.248 ug/ml	Not applicable	0.5 and 12 hr after 0.2 mg/kg IV of the sodium tetrahydrate. Decline was biexponential. Premature infant with patent ductus arteriosus. DRUGS; MEASUREMENT METHODS; BLOOD PLASMA; ANTI-INFLAMMATORY AGENTS; INFANTS	Evans, M.A. 1980
2337 Blood, plasma	Ingestion Rectal	HPLC	41	a) 405-715 ng/ml b) 913-1013 ng/ml	a) Not given b) Not given	a) Range of means 1-2.5 hr after 0.1 mg/kg, 2-16 cases per mean b) Range of means 1-2 hr after 0.2 mg/kg, 204 cases per mean 1 observation per case. No effect of route, no difference in mean maxima for responders, nonresponders. Preterm infants with patent ductus arteriosus, postconception age 32.5 + or - 3.5 wk. 33 of 65 either complete or partial patent ductus arteriosus closure. DRUGS; DRUG THERAPY; INFANTS; BLOOD PLASMA; CANADA	Alpert, B.S. Levins, M.J. Rowland, D.W. Grant, N.J.A. Olley, P.M. Soldin, S.J. Swyer, P.R. Coceani, F. Rowe, R.D. 1979

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Indole-3-acetic acid, 1-(p-chlorobenzoyl)-5-methoxy-2-methyl- (8 Cl)
1H-Indole-3-acetic acid, 1-(4-chlorobenzoyl)-5-methoxy-2-methyl- (9 Cl)
53-86-1
C19-H16-Cl-N-O4
MW 357.81, 88 different forms 155 C, 162 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSES	HEAD	GENERAL INFORMATION	REFERENCE
233P Blood, serum	Ingestion	GC	17	0.2-8.5 ug/ml	Not given	low and peak values, 0 and 1 hr of 4 hr study. Dose, 25 mg/8 hr. Estimated from graph. Large variations between patients. Patients, ages 40-70 yr, with rheumatoid arthritis 3-22 yr. Indigestion in 9 of 9 cases. Therapeutic benefits for morning stiffness, grip strength, walking speed, joint parameters. DRUGS; DRUG THERAPY; ANTI-INFLAMMATORY AGENTS; ANALGESICS; ADULTS; NEW ENGLAND; BLOOD SERUM; COMPARATIVE EVALUATIONS	McArthur, A.W. Ferry, D.G. Palmer, D.G. 1979
233P Urine	Ingestion	GC-EC	17	a) 280-2,570 ug/day b) 270-8,940 ug/day c) 680-14,350 ug/day d) 1,200-12,320 ug/day	a) 1,431 ug/day b) 1,812 ug/day c) 5,970 ug/day d) 4,760 ug/day	a) Free form, after 3 wk treatment b) Free form, after 3 wk treatment plus probenecid c) Free form, plus glucuronide conjugate, after 3 wk treatment d) Free form, plus glucuronide conjugate, after 3 wk treatment plus probenecid Patients received 25 mg every 8 hr Probenecid (0.5 gm) twice daily. Pharmacokinetic data available. 6 men, 11 women with rheumatoid arthritis, 29-64 yr old. DRUGS; DRUG THERAPY; RHEUMATOID ARTHRITIS; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; UNITED KINGDOM	Faber, M. Halliday, L. Gibson, R. Littler, T. Orme, M.L'E. 1978

Iodide
20461-54-5
I
AIR 127.9

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2340 Milk				2-12 ug/dl	Not given	Women in Birmingham, Bristol, Cardiff, Edinburgh, and Newcastle. SODIUM; FLUORINE; IODINE; METALS; MILK; UNITED KINGDOM	Anon 1977

Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.03 mm Hg at 0 C, 0.385 mm Hg at 25 C, 2.154 mm Hg at 50 C, 28.78 mm Hg at 90 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2341 Blood, plasma	Dermal		a) 16 b) 16 c) 12 d) 6 e) 6	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 48 ug/100 ml b) 19 ug/100 ml c) 70.0 ug/100 ml d) 26.2 ug/100 ml e) 15.9 ug/100 ml	a) Post, 12 hr after 1 application b) 72 hr after 1 application c) Day 3, with 3 applications a day d) Day 3, single application e) Day 3, controls In a) and b) 5-6 of 16 infants used for each serial determination, and values are taken from graph. In all, application is of povidone iodine to umbilical cord and skin around it. Additional data available. Normal term neonates born at Cook County Hospital. IODINE; TRACE ELEMENTS; BLOOD PLASMA; URINE; INFANTS; ILLINOIS	Pyati, S.P. Pamamurthy, R.S. Krauss, M.T. Pildes, R.S. 1977
2342 Blood, serum		NS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 48,000 ug/dl b) 17,500 ug/dl	a) Patient 1, post-burn day 11 b) Patient 2, post-burn day 10 30 yr old patient with 75% burn, and 72 yr old patient with 35% burn. Acidosis, renal insufficiency, cardiorespiratory arrest, bradycardia, hypotension. Death from pseudomonas bronchopneumonia. Vacuolar degeneration of proximal convoluted tubules. Pulmonary edema. IODINE; DRUGS; BLOOD SERUM; URINE	Pietsch, J. Meakins, J.L. 1976
2343 Hair		NA	11	11.2-15.8 ppm	13.4 ppm	Scalp hair Ionors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.R. Velandia, J.A. Dienes, M. 1977
2344 Urine		NS	a) 1 b) 1	a) Not applicable b) 44-65 mg/dl	a) 50 mg/dl b) 50.8 mg/dl	a) Patient 1, post-burn day 11 b) Patient 2, post-burn day 10 30 yr old patient with 75% burn, and 72 yr old patient with 35% burn. Acidosis, renal insufficiency, cardiorespiratory arrest, bradycardia, hypotension. Death from pseudomonas bronchopneumonia. Vacuolar degeneration of proximal convoluted tubules. Pulmary edema. IODINE; DRUGS; BLOOD SERUM; URINE	Pietsch, J. Meakins, J.L. 1976

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Iodine
7553-56-2
I
AtW 126.9045, MP 113.60 C, BP 185.24 C, VP (solid) 0.33 mm Hg at 0 C, 0.305 mm Hg at 25 C, 2.154 mm Hg at 50 C, 26.78 mm Hg at 90 C
(CONTINUED)

TISSUE	PENETRATION ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2345 Urine	Dermal		3	a) Not given b) Not given	a) 2989 ug/l b) 986.6 ug/l	a) Day 1 after single application of povidone iodine to umbilical cord and skin around it b) Day 2 after single application Additional data available. Normal term neonates born at Cook County Hospital. IODINE; TRACE ELEMENTS; BLOOD PLASMA; URINE; INFANTS; ILLINOIS	Pyati, S.P. Ramamurthy, R.S. Krause, M.T. Pildes, R.S. 1977
2346 Urine		NA	a) 1 b) 1	a) 96-612 ug/24 hr b) 255-921 ug/24 hr	a) 210 ug/24 hr b) 588 ug/24 hr	a) Healthy male, 5 determinations over 4 mo b) Healthy female, 2 determinations 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelia, R. Speecke, A. Houte, J. 1975

Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2347 Adipose		X-ray spectros	9	Not given	11.9 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Patough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2348 Aorta		X-ray spectros	9	Not given	133 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Patough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2349 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 56 ug/100 ml b) 95 ug/100 ml c) 83 ug/100 ml d) 134 ug/100 ml e) 134 ug/100 ml f) 129 ug/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity. Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Bogden, J.D. Thind, I.S. Heap, F.W. Caterini, H. 1978
2350 Blood						Review METALS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; METALLOPROTEINS; RHEUMATOID ARTHRITIS; REVIEW	Sorenson, J.R.J. 1978
2351 Blood		BA	a) 702 b) 663	a) Not given b) Not given	a) 2366 + or - 366 ug/g b) 2753 + or - 393 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Naglan, R.J. Bral, A.S. Schubert, A. Wilson, D. Larsen, E. Dyer, N. Mansour, E. Schaffner, W. Hoffman, L. Davies, J. 1974

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Iron
7439-89-6
Fe
Atw 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2352 Blood		AAS	122	a) Not given b) Not given c) Not given	a) 98.3 + or - 32.9 ug/100 ml b) 97.5 + or - 23.6 ug/100 ml c) 100.0 + or - 31.0 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Storage battery workers after 24 wk treatment with zinc and vitamin C c) Controls Workers, aged 20-60 yr, in battery plant from 0-36 yr. 100 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBINS; URINE; DIETS; VITAMIN C	Papaioannou, P. Sobler, A. Pfeiffer, C.C. 1978
2353 Blood, plasma	Injection Ingestion		9-27 per group	a) 155-67 ug/dl b) 160-75 ug/dl c) 155-67 ug/dl d) 168-73 ug/dl	a) Not given b) Not given c) Not given d) Not given	a) Controls (no Fe supplement) b) Postnatal treatment c) Prenatal treatment d) Pre- and postnatal treatment Levels in infants at birth-higher values, levels at 18 mon-lower values. Range in range of means, males or females. Mothers of groups c) and d) given 1.2 mg in one prenatal IV injection, infants in groups b) and d) ingested 1-2 mg/kg/d from 2-18 mo of age. Other data available. Mothers mean age of 27 yr, were short, had very little education and lived in poor sanitary conditions in Guanajuato, Mexico. At partus, treated group had higher hemoglobin, PCV and MCHC than untreated, Fe levels same for both groups. No difference in hemoglobin levels of newborns. Groups b) and c) higher at 6-12 mo in males only. METALS; IRON; BLOOD PLASMA; INFANTS; NEWBORN; PREGNANCY; IN VIVO ANALYSIS; MEXICO	Lorie, H. Sanchez-Medal, L. Arroyo, P. Cordourier, H. Piedras, J. Casanueva, E. 1979
2354 Blood, serum			3 of 30	> or = 70 ug/dl	Not given	Children with anemia. 60 lead levels >60 ug/dl, 30 of 60 hemoglobins <11 g/dl. Patients at Milwaukee Children's Hospital LEAD; IRON; HEMOGLOBINS; PROTEINS; METALS; BLOOD; BLOOD SERUM; LEAD POISONING; CHILDREN; WISCONSIN	Smith, P.D. 1978

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Iron
7439-89-6
Fe
AtW 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1767 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2355 Blood, serum		Colorimetry	a) 57 b) 51 c) 45 d) 43 e) 23 f) 11 g) 5 h) 18 i) 9	a) Not given b) Not given c) Not given d) Not given e) 10.0-37.5 umole/l f) 14.5-32.0 umole/l g) 13.0-41.0 umole/l h) 16.0-46.0 umole/l i) 17.5-35.0 umole/l	a) 22.1 umole/l b) 22.0 umole/l c) 18.8 umole/l d) 24.0 umole/l e) 24.4 umole/l f) 22.6 umole/l g) 27.4 umole/l h) 25.7 umole/l i) 27.9 umole/l	a) Males b) Females not using oral contraceptives c) Females using oral contraceptives d) Male students of similar age e) Cable factory workers with blood Pb < 200 ppb f) Cable factory workers with blood Pb > 200 ppb g) Workers, secondary Pb smelter with blood Pb 101-200 ppb h) Workers, secondary Pb smelter with blood Pb 401-500 ppb i) Workers, secondary Pb smelter with blood Pb 701-800 ppb METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SERUM; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SHELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Zielhuis, R.L. del Castilho, P. Herber, R.F.M. Wibowo, A.A.E. 1978
2356 Blood, serum	Ingestion		1	462-316 ug/100 ml	Not given	Admission to 48 hr after admission 24 yr old black woman admitted to Montefiore Hospital, in Pittsburgh, following ingestion of 10-15 ferrous sulfate tablets (3.0-4.5 g). Nausea, vomiting, generalized weakness, hypoactive bowel sounds, bloody stool Mild tachycardia, inverted T waves in precordial leads (ECG) METALS; IRON; BLOOD SERUM; URINE; ADULTS; CASE HISTORIES; SUICIDE; PENNSYLVANIA	Wallack, M.K. Winkelstein, A. 1974
2357 Blood, serum		AAS	187	a) Not given b) Not given	a) 109 ug/100 ml b) 94 ug/100 ml	a) Men b) Women Criteria for low levels < 39 ug/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978
2358 Blood, serum	Ingestion		1	Not applicable	41 ug/100 ml	Black woman aged 46 yr from Jersey City, NJ Pulse rate of 106/min, grade II/VI midsystolic ejection murmur, grand mal seizure Anemia, encephalopathy, lead nephropathy, vitiligo and hyperpigmentation of gums, pale conjectivae, uterus enlarged with fibromyomas. LEAD; IRON; METALS; BLOOD; BLOOD SERUM; LEAD POISONING; ANEMIA; NEW JERSEY; NEUROLOGIC MANIFESTATIONS; NERVOUS SYSTEM DISEASES; URINE	Wedeen, R.P. Mallik, D.K. Batuman, V. Bogden, J.D. 1978

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Iron
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Fe
AtW 55.847, MP 1535 C (pure), 1080-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2359 Blood, serum	Ingestion		1	Not given	140 ug/100 ml	Patient aged 28 living in Britain had purchased aphrodisiacs from Bangladesh. Constipation, precordial pain, generalized pain, colicky loin pain, nausea, and vomiting Intestinal ileus sideroblastic anemia LEAD; METALS; LEAD POISONING; UNITED KINGDOM; BLOOD; URINE; BLOOD SERUM	Brearley, R.L. Forsythe, A.M. 1978
2360 Blood, serum	Ingestion		1	a) Not given b) Not given c) Not given	a) 3,630 ug/dl b) 13,585 ug/dl c) 240 ug/dl	a) 0 hr after ingestion b) 11 hr after ingestion c) 24 hr after ingestion 3,200-3,900 mg elemental iron ingested. 18-month-old boy hospitalized after ingesting 50-60 ferrous sulfate tablets. Symptoms during analysem: obtundent hypotension, bloody diarrhea, anicteric, liver fire and enlarged, elevated blood amancia, moderate acidosis and jaundice. Patient died following cardiac arrest. Massive hepatic necrosis. METALS; IRON; METAL POISONING; BLOOD PLASMA; LIVER; KIDNEYS; HYPOTENSION; CHILDREN; CASE HISTORIES	Gleason, W.A. deMello, D.E. deCastro, P.J. Connors, J.J. 1979
2361 Blood, serum	Ingestion		1	a) Not applicable b) Not applicable c) Not applicable	a) 3.1 ug/ml b) 3.4 ug/ml c) 0.9 ug/ml	a) 4 hr after 1631.8 mg FeSO4 b) 18 hr after 1631.8 mg FeSO4, phosphate lavage, Deferoxamine IV, calcium gluceptate c) 56 hr, with continued therapy. 15 kg, 2 yr old Comatose, lethargic during therapy, bloody diarrhea and vomiting. Hypocalcemia, hyperphosphatemia, hypomagnesemia hypernatremia, metabolic acidosis. CALIFORNIA; METALS; METAL POISONING; CHILDREN; BLOOD SERUM; DRUG THERAPY; LAVAGE	Bachrach, L. Correa, A. Levin, B. Grossman, H. 1979

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Fe
Atw 55.847, MP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), BP 3000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

ID.NO	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2362 Blood, serum		Colorimetry	a) 10 b) 5	a) 16.0-47.5 umol/l b) 27.5-42.0 umol/l	a) 29.2 umol/l b) 36.5 umol/l	a) 10 patients, 4-18 yr old b) 5 patients, 23-42 yr old Data also for Fe binding and absorption Progressive Fe loading with increasing age. Patients with full clinical picture of B-thalassaemia intermedia. 5 previously transfused with 2-15 units blood, 5 previously transfused with 25-48 units, 5 non-tranfused. METALS; TRACE ELEMENTS; IRON; BLOOD SERUM; COMPARATIVE EVALUATIONS; AGE; CHILDREN; ADULTS; URINE; BIOACCUMULATION; FECES; UNITED KINGDOM	Pippard, M.J. Warner, G.T. Callender, S.T. Weatherall, D.J. 1979
2363 Blood, serum						Review IRON; REVIEW; DISEASES; INFECTION; BLOOD SERUM	Weinberg, E.D. 1974
2368 Blood, serum	Ingestion		1	Not given	130 ug/100 ml	Normal range is 60-160 ug/100 ml 47-yr-old housewife with cardiac failure of undetermined cause. Dyspnea, fatigue, cough Unusual darkening of the skin, cardiac decompensation, abnormal glucose tolerance curve, deranged liver function, greatly increased liver iron stores and histologic pattern consistent with hemochromatosis. IRON; CALIFORNIA; METAL POISONING; MINERAL METABOLISM; BLOOD SERUM; CASE HISTORIES	Crosby, W.H. Dawson, A.D. Bench, P.K. Korn, E.M. Sacks, P.V. Saltzman, P. Tan, L.T. 1974
2365 Blood, serum		AAS	24	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.75 ug/ml b) 1.21 ug/ml c) 1.00 ug/ml d) 1.12 ug/ml e) 1.01 ug/ml	a) 4-6 wo lactation b) 7-9 wo lactation c) 10-15 wo lactation d) 16-21 wo lactation e) 22-31 wo lactation White women, 2-30 wo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
2366 Blood, serum			a) 3 b) 10 c) 44 d) 28 e) 3 f) 8	a) 6-14 umole/l b) 6-16 umole/l c) 3-28 umole/l d) 8-25 umole/l e) 10-25 umole/l f) 5-12 umole/l	a) 11.0 umole/l b) 10.4 umole/l c) 15.0 umole/l d) 11.2 umole/l e) 17.3 umole/l f) 7.8 umole/l	a) 10-<15 yr old male, Fitzroy Crossing b) 10-<15 yr old female, Fitzroy Crossing c) 20-<60 yr old male, Nowanjua d) 20-<60 yr old female, Nowanjua e) 60+ yr male, Fitzroy Crossing f) 60+ yr old female, Fitzroy Crossing Depressed serum iron in >50%. Aborigines, 5-77 yr old, from Nowanjua and Fitzroy Crossing communities of N.W. Australia. BLOOD SERUM; BLOOD PLASMA; ZINC; COPPER; IRON; METALS; AUSTRALIA; DIETS; AGE; CHILDREN; ADULTS	Holt, A.B. Spargo, R.M. Iveson, J.B. Faulkner, G.S. Cheek, D.B. 1980

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AtW 55.847, BP 1535 C (pure), 1000-1300 C (cast), 1500 C (wrought), 1300 C (steel), MP 1000 C, VP 1 mm Hg at 1787 C, 10 mm Hg at 2040 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2367 Hair		NA	11	46-87 ppm	65 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
2368 Hair		AAS	a) 282 b) 202	a) 2.70-152.00 ug/g b) 3.60-177.00 ug/g	a) 20.83 ug/g b) 22.30 ug/g Geometric means	a) Children b) Adults Correlations between Fe and the following: hair color and education of head of household. Hair Fe higher in smokers than nonsmokers. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
2369 Hair		AAS	8	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 25 ppm b) 20 ppm c) 23 ppm d) 17 ppm e) 23 ppm	a) 1-6 mo lactation b) 7-9 mo lactation c) 10-15 mo lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.B. 1979
2370 Kidney		X-ray spectros	12	a) Not given b) Not given	a) 358 ppm dry wt b) 833 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, H.W. Nielson, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2371 Kidney		ES	a) 135 b) 74 c) 87	a) Not given b) Not given c) Not given	a) 299 ppm b) 298 ppm c) 282 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2372 Liver		X-ray spectros	10	Not given	853 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, M.F. Hill, M.W. Nielson, M.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2373 Liver	Injection Ingestion		9	8230-32400 ug/g wet wt	18197.8 ug/g wet wt	Patients (ages 5-21 yr) on 500 mg/day ascorbic acid, 750 mg desferrioxamine B IM 6 days/wk, 2 g desferrioxamine IV per unit transfused red cells. Patients with Fe overload from chronic transfusion therapy of beta-thalassemia. IRON; METALS; LIVER; URINE; MINERAL METABOLISM; DISEASES; METAL POISONING; COMPARATIVE EVALUATIONS	Propper, R.D. Shurin, S.B. Nathan, D.G. 1976
2374 Liver		ES	a) 91 b) 44 c) 76	a) Not given b) Not given c) Not given	a) 445 ppm b) 616 ppm c) 520 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c) ($P<0.01$), b) and c) different ($P<0.05$) Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2375 Lung		ES	30	25.2-3165.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.R. Knott, H.J. Holtz, J.L. Gorski, C.H. 1967
2376 Lung		AAS	20	Not given	1998.0 mg/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2377 Lung		AAS	a) 129 b) 15	a) 2.0-8.3 mg/g dry wt b) Not given	a) 2.9 mg/g dry wt b) 1.4 mg/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
2378 Lung		AAS	134	2.0-8.3 mg/g dry wt	3.0 mg/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Listiaca, L.P. Morris, H.B. Holtz, J.L. Hauer, F. Wolowicz, P.R. 1971
2379 Lymph node		AAS	14	Not given	966.0 mg/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971

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(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2380 Milk		AAS	a) 28 b) 39 c) 23 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.49 + or - 0.05 ug/ml b) 0.43 + or - 0.04 ug/ml c) 0.42 + or - 0.06 ug/ml d) 0.38 + or - 0.05 ug/ml e) 0.39 + or - 0.09 ug/ml f) 0.42 + or - 0.08 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 mo lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr age, 22 primiparae and 16 multiparae. BLOOD SERUM; MILK; METALS; LACTATION; HAIR; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
2381 Milk		AAS	15	0.26-0.73 ug/ml	0.41 ug/ml	0.1-19 mo post partum. 15-46% bound to lipid fraction. Healthy Swedish mothers. MILK; IRON; METALS; SWEDEN; TRACE ELEMENTS	Fransson, G-B. Lonnerdal, B. 1980
2382 Pancreas		X-ray spectros	8	Not given	205 ppm dry wt	2 samples per case. 2 analyses per sample. Autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2383 Placenta		NA	944	Not given	738 + or - 234 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schalert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, R. Schaffner, W. Hoffman, L. Davies, J. 1978
2384 Spleen		X-ray spectros	8	Not given	3851 ppm dry wt	2 samples per case. 2 analyses on each sample. 1978 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2385 Spleen		ES	a) 40 b) 84 c) 76	a) Not given b) Not given c) Not given	a) 730 ppm b) 887 ppm c) 802 ppm	a) No renal disease b) Acute renal failure c) Chronic renal failure a) and b) different, P<0.05 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Iafrapraait, S. Alexander, G.V. Gonick, H.C. 1974
2386 Urine		AAS	12	a) 3.29-80.3 mg b) 6.4-65.2 mg	a) 16.3 mg b) 31.4 mg	a) IM injection b) SC injection 48 hr urines before transfusion, after 750 mg desferrioxamine was given to 9 patients. Results similar 1 or 2 days after routine blood transfusion. Increasing infused dose to 1500 mg increased excretion an average of 429% in 6 patients. 11 patients with thalassemia, ages 6-17 yr and 1 with congenital sideroblastic anemia, age 2½. IRON; UNITED KINGDOM; URINE	Hussain, M.A.M. Green, R. Flynn, D.M. Hussain, S. 1976
2387 Urine	Ingestion		1	Not applicable	58 mg/100 ml	48 hr after admission. 24 yr old black woman admitted to Montefiore Hospital, in Pittsburgh, following ingestion of 10-15 ferrous sulfate tablets (3.0-4.5 g). Nausea, vomiting, generalized weakness, hyperactive bowel sounds, bloody stool Mild tachycardia, inverted T waves in precordial leads (ECG) METALS; IRON; BLOOD SERUM; URINE; ADULTS; CASE HISTORIES; SUICIDE; PENNSYLVANIA	Wallach, H.K. Winkelstein, A. 1974
2388 Urine		AAS	5	0.2-0.6 mg/24 hr	0.4 mg/24 hr	Positive Fe balance of 2.6-8.6 mg/day Progressive Fe loading with increasing age. Patients, 7-20 yr old, with full clinical picture of B-thalassaemia. 3 previously transfused with 6-25 units blood, 2 non-transfused. METALS; TRACE ELEMENTS; IRON; BLOOD SERUM; COMPARATIVE EVALUATIONS; AGE; CHILDREN; ADULTS; URINE; BIOACCUMULATION; FECES; UNITED KINGDOM	Pippard, M.J. Warner, G.T. Callender, S.T. Weatherall, D.J. 1979

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(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2389 Urine	Injection Ingestion	AAS	10	a) 3.4-35.1 mg/24 hr b) 41.4-150.0 mg/24 hr c) Not given d) Not given	a) 19.2 mg/24 hr b) 66.9 mg/24 hr c) 20.1 mg/24 hr d) 60 mg/24 hr	a) After 750 mg desferrioxamine B IM b) After 4 g desferrioxamine with transfusion of red cells c) 14-yr-old girl, 750 mg/day desferrioxamine IM d) Same as in c) but by 24-hr IV infusion 2 days Patients in a) and b) were ages 5-21 yr on 500 mg/day ascorbic acid, 750 mg desferrioxamine B IM 6 days/wk, 2 g desferrioxamine IV per unit of transfused red cells. Patients with Fe overload from chronic transfusion therapy of beta-thalassemia. IRON; METALS; LIVER; URINE; MINERAL METABOLISM; DISEASES; METAL POISONING; COMPARATIVE EVALUATIONS	Propper, R.D. Shurin, S.B. Nathan, D.G. 1976
2390 Urine	Ingestion	AAS	12	a) Not given b) Not given	a) 0.15 + or - 0.01 mg/day b) 0.20 + or - 0.01 mg/day	a) Low fiber diet plus 21.8 mg Fe/day for 26 days b) High fiber diet plus 26.4 mg Fe/day for 26 days Mean + or - S.E. Samples collected during last 7 days. Balance data available. 37-58 yr old men METALS; TRACE ELEMENTS; MINERALS; URINE; ADULTS; FECES; CALCIUM; MAGNESIUM; IRON; SILICON; COMPARATIVE EVALUATIONS; DIETS; FIBERS; METABOLISM; MARYLAND	Kelsay, J.L. Behall, K.M. Prather, E.S. 1979

Isonipecotic acid, 1-methyl-4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9 CI)
57-42-1
C15-H21-N-O2
MW 247.35, MP 186-189 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2391 Bile	Ingestion Injection	GC	2	0.9-1.3 ug/100 ml	1.1 ug/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2392 Blood	Ingestion Injection	GC	11	0.1-2.0 ug/100 ml	0.58 ug/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined causes or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2393 Blood			13	0.01-11.0 ug/ml	2.5 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; OTAR; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2394 Blood	Injection	GC	a) 24 b) 13	a) 11-162 ng/ml b) 40-99 ng/ml	a) 95 + or - 43 ng/ml b) 64 + or - 22 ng/ml	a) Venous clamped umbilical cord blood at birth b) Arterial clamped umbilical cord blood at birth Levels decreased as drug-birth intervals increased. 30 neonates whose mothers received 50 mg meperidine intravenously during labor. Mothers without liver or kidney disease or drug addiction, 14 Black, 16 White. DRUGS; PREGNANCY; BLOOD; URINE; METABOLITES; OHIO; UMBILICAL CORD; NEWBORN	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. 1979
2395 Blood	Injection	GC	10	0.7-3.0 ug/ml	Not given	Range of means 10 and 260 min post-injection. Estimated from graph. Pregnant patients at term, ages 15-28 yr, without liver or kidney disease or drug addiction. DRUGS; PREGNANCY; BLOOD; METABOLITES; OHIO; DRUG THERAPY	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. Foltz, R.L. 1979

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Isonipecotic acid, 1-methyl-4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9 CI)
57-42-1
C15-H21-N-O2
MW 247.35, MP 186-189 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2396 Blood, plasma	Injection	GC	4	a) 0.019-0.093 ug/ml b) 0.014-0.18 ug/ml	a) 0.053 ug/ml b) 0.073 ug/ml	a) Cord venous plasma at delivery b) Maternal venous plasma at delivery Pregnant women, 16-30 yr old from Sydney, Australia, in 33-40 wk of gestation. DRUGS; BLOOD PLASMA; PREGNANCY; AUSTRALIA	Morgan, D. Moore, G. Thomas, J. Triggs, E. 1978
2397 Blood, plasma	Injection	GC	a) 7 b) 12	a) 0.05-0.08 ug/ml b) 0.8-0.07 ug/ml	a) Not applicable b) Not applicable	a) Non-pregnant b) Pregnant 5-210 min after 50 mg IV. Decline biexponential. No difference in kinetic parameters. Patients who had drug during labor, and neonates. Nonpregnant females, of child bearing age, studied early in menstrual cycle. DRUGS; METABOLISM; PREGNANCY; NEWBORN; ANALGESICS; BLOOD PLASMA; METABOLITES; COMPARATIVE EVALUATIONS; URINE	Kuhnert, B.R. Kuhnert, P.M. Prochaska, B.S. Sokol, R.J. 1980
2398 Blood, plasma	Injection	GC	3	1.21-0.15 ug/ml	Not applicable	0 and 300 min after 0.143 mg/kg IV in 2 min. Biexponential decline. Non-smokers without recent hepatitis or exposure to medications, about 21 yr old. DRUGS; NARCOTICS; BLOOD PLASMA; ADULTS; CALIFORNIA; COMPARATIVE EVALUATIONS	Fung, D.L. Asling, J.H. Eisele, J.W. Martucci, R. 1980
2399 Blood, serum	Injection	GC	12	a) 140-40 ng/ml b) 120-18 ng/ml	a) Not applicable b) Not applicable	a) Range of means 1 and 8 hr after 30 mg/sq m IM of the hydrochloride. Initial value, 112 ng/ml at 0.5 hr b) Controls. Range of means 1 and 8 hr after 30 mg/sq m IM, placebo. Initial value, 116 ng/ml at 0.5 hr Both groups pretreated 14 days with phenobarbital or placebo, 32.5 mg t.i.d. Clearance complete at 24 hr. Medical students, ages 21 to 30 yr, within 10% of ideal weight, without recent history of barbiturate use. DRUGS; DRUG THERAPY; MEPERIDINES; METABOLISM; NARCOTICS; BLOOD SERUM; URINE; METABOLITES; COMPARATIVE EVALUATIONS	Staubaugh, J.E. Wainer, I.W. Schwartz, I. 1978
2400 Liver	Ingestion Injection	GC	9	0.2-3.0 mg/100 g	1.02 mg/100g	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978

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Isonipecotic acid, 1-methyl-4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 1-methyl-4-phenyl-, ethyl ester (9 CI)
57-42-1
C15-H21-N-02
MW 247.35, MP 186-189 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2401 Urine	Ingestion Injection	GC	5	0.2-5.0 mg/100 ml	2.28 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2402 Urine	Injection	GC	30	0.5-14.25 ug/mg creatinine	Not given	Levels during first 3 days of life, estimated from graph. Level varied with day of collection and drug-birth interval. Clearance from neonate not completed at 3 days. Mothers received 50-mg dose during labor. DRUGS; PREGNANCY; BLOOD; URINE; METABOLITES; OHIO; UMBILICAL CORD; NEWBORN	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. 1979
2403 Urine	Injection	GC	45	a) 2.6-0.05 ug/mg creatinine b) 3.25-0.35 ug/mg creatinine c) 3.35-0.125 ug/mg creatinine d) 2.20-0.5 ug/mg creatinine e) 8.65-0.75 ug/mg creatinine f) 2.2-1.3 ug/mg creatinine	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Meperidine, post-partum patients, 12 and 72 hr after 50 mg b) Normeperidine, post-partum patients, 12 and 72 hr after 50 mg meperidine c) Meperidine, controls, 12 and 72 hr after 50 mg d) Normeperidine, controls, 12 and 72 hr after 50 mg meperidine e) Meperidine, neonates, after 50 mg to mothers, 1-3 days postpartum f) Normeperidine, neonates, after 50 mg meperidine to mothers, 1-3 days postpartum 12-hr urines Patients who had drug during labor, and neonates. Nonpregnant females, of child bearing age, studied early menstrual cycle. DRUGS; METABOLISM; PREGNANCY; NEWBORN; ANALGESICS; BLOOD PLASMA; METABOLITES; COMPARATIVE EVALUATIONS; URINE	Kuhnert, B.R. Kuhnert, P.M. Prochaska, B.S. Sokol, R.J. 1980
2404 Urine	Injection	GC	12	a) 0.67-3.49 mg b) 1.05-7.30 mg c) 4.14-14.60 mg d) 4.49-13.10 mg	a) 1.67 mg b) 2.88 mg c) 8.58 mg d) 9.29 mg	a) Phenobarbital-pretreated b) Placebo-pretreated c) Phenobarbital pretreated, values are meperidinic acid d) Placebo-pretreated, values are meperidinic acid 48-hr cumulative urines after 30 mg/sq m IM Meperidine-HCl. Pretreatment was 3X32.5 mg/day phenobarbital (or placebo) 14 days. Medical students, ages 21 to 30 yr, within 10% of ideal weight, without recent history of barbiturate use. DRUGS; DRUG THERAPY; MEPERIDINES; METABOLISM; NARCOTICS; BLOOD SERUM; URINE; METABOLITES; COMPARATIVE EVALUATIONS	Stambaugh, J.E. Wainer, I.W. Schwartz, I. 1978

Isonipecotic acid, 4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 4-phenyl-, ethyl ester (9 CI)
77-17-8
C14-H19-N-02
MW 233.34

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2405 Bile	Ingestion Injection	GC	2	1.0-1.6 mg/100 ml	1.3 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2406 Blood	Ingestion Injection	GC	11	0-3.0 mg/100 ml	0.67 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2407 Blood	Injection	GC/MS	a) 13 b) 10	a) 5-38 b) 2-42	a) 17 + or - 14 b) 15 + or - 13	a) Venous clamped umbilical cord blood at birth b) Arterial clamped umbilical cord blood at birth Levels unrelated to drug-birth intervals. 30 neonates whose mothers received 50 mg meperidine intravenously during labor. Mothers without liver or kidney disease or drug addition, 14 Black, 16 White. DRUGS; PREGNANCY; BLOOD; URINE; METABOLITES; OHIO; UMBILICAL CORD; NEWBORN	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. 1979
2408 Blood	Injection	GC/MS	12	0.003-0.022 ug/ml	Not given	Range of means 10 and 260 min after single injection of 50 mg meperidine during labor. Estimated from graph. Pregnant patients at term, ages 15-28 yr, without liver or kidney disease or drug addiction, with long drug-birth intervals. DRUGS; PREGNANCY; BLOOD; METABOLITES; OHIO; DRUG THERAPY	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. Foltz, R.L. 1979
2409 Liver	Ingestion Injection	GC	9	0-6.6 mg/100 g	1.73 mg/100 g	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
2410 Urine	Ingestion Injection	GC	5	0.01-7.9 mg/100 ml	0.08 mg/100 ml	Medical examiner cases of death from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978

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Isonipecotic acid, 4-phenyl-, ethyl ester (8 CI)
4-Piperidinecarboxylic acid, 4-phenyl-, ethyl ester (9 CI)
77-17-8
C14-H19-N-02
MW 233.34

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2411 Urine	Injection	GC/MS	30	0.6-3.75 ug/mg creatinine	Not given	Levels during first 3 days of life, estimated from graph. Level varied with day of collection and drug-birth interval. Clearance from neonate not complete at 3 days. Mothers received 50-mg dose meperidine during labor. DRUGS; PREGNANCY; BLOOD; URINE; METABOLITES; OHIO; UMBILICAL CORD; NEWBORN	Kuhnert, B.R. Kuhnert, P.M. Tu, A-S.L. Lin, D.C.K. 1979
2412 Urine	Injection	GC	12	a) 1.31-4.10 mg b) 0.79-2.37 mg c) 3.02-9.75 mg d) 2.16-6.51 mg	a) 2.83 mg b) 1.60 mg c) 7.03 mg d) 4.33 mg	a) Phenobarbital-pretreated b) Placebo-pretreated c) Phenobarbital pretreated, values are normeperidinic acid d) Placebo-pretreated, values are normeperidinic acid 48-hr cumulative urines after 30 mg/sq m IM Meperidine-HCl. Pretreatment was 3X32.5 mg/day phenobarbital (or placebo) 14 days. Medical students, ages 21 to 30 yr, within 10% of ideal weight, without recent history of barbiturate use. DRUGS; DRUG THERAPY; MEPERIDINES; METABOLISM; NARCOTICS; BLOOD SERUM; URINE; METABOLITES; COMPARATIVE EVALUATIONS	Stambaugh, J.E. Wainer, I.W. Schwartz, I. 1978

Isoquinoline, 6,7-dimethoxy-1-veratryl- (8 CI)
Isoquinoline, 1-((3,4-dimethoxyphenyl)methyl)-6,7-dimethoxy- (9 CI)
58-74-2
C20-H21-N-O4
MW 339.38, MP 147 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2413 Urine	Ingestion	GC	5	a) Not given b) Not given c) Not given	a) 17.9 % b) 48.5 % c) 50.9 %	a) 2 hr b) 24 hr c) 48 hr Total cumulative excretion of metabolites expressed as percent of 100-mg dose. DRUGS; URINE; METABOLITES	Belpaire, F.M. Rosseel, M.T. Bogaert, M.G. 1978

Kanechlor 400
12737-87-0
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2414 Blood	Ingestion		a) 202 b) 65 c) 16 d) 6	a) 1-4 ppb b) 5-9 ppb c) 10-19 ppb d) 20.31 ppb	a) Not given b) Not given c) Not given d) Not given	Residents of Western Japan (age 0-80 yr) who consumed an average of 809 ml of bran oil contaminated with 1000 ppm PCB's. Respiratory symptoms (e.g., coughing, expectoration, and wheezing) correlated with blood PCB levels. Lymphocyte infiltration in bronchial and bronchiolar walls and macrophage infiltration in alveoli. Focal hemorrhage and/or pulmonary edema and pleural and pericardial effusion or adhesion observed in 3 patients. LUNGS; BLOOD; CASE HISTORIES; POLYCHLORINATED BIPHENYLS	Shigematsu, N. Ishimaru, S. Saito, R. Ikeda, T. Matsuba, K. Sugiyama, K. Masuda, Y. 1978
2415 Lung	Ingestion		7	1-31 ppb	Not given	Respiratory symptoms (e.g., coughing, expectoration, and wheezing) correlated with blood PCB levels. Lymphocyte infiltration in bronchial and bronchiolar walls and macrophage infiltration in alveoli. Focal hemorrhage and/or pulmonary edema and pleural and pericardial effusion or adhesion observed in 3 patients. LUNGS; BLOOD; CASE HISTORIES; POLYCHLORINATED BIPHENYLS	Shigematsu, N. Ishimaru, S. Saito, R. Ikeda, T. Matsuba, K. Sugiyama, K. Masuda, Y. 1978

L-Ascorbic acid
50-81-7
C6-88-06
MW 176.12, MP 190-192 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2416 Blood, cells	Ingestion		a) 46 b) 42 c) 11 d) 11	a) 16.2-54 ug/10(E+8) cells b) 4.2-24.7 ug/10(E+8) cells c) 4.2-17.1 ug/10(E+8) cells d) 8.6-21.0 ug/10(E+8) cells	a) 31.5 ug/10(E+8) cells b) 11.2 ug/10(E+8) cells c) 10.7 ug/10(E+8) cells d) 15.1 ug/10(E+8) cells	a) Controls, ages 19-55 b) Controls, ages 59-97 (long-stay geriatrics) c) Geriatric patients before Vitamin C therapy d) Geriatric patients at 1 g/day, 4 wk Data given for placebo groups. Long-stay patients, ages 59-97, in 2 geriatric hospitals in England. 46 blood-donor controls, ages 19-55. Clinical improvements and weight gains in the Vitamin C group. VITAMINS; AGE; UNITED KINGDOM; DISEASES; LEUKOCYTES; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; DIETS; NUTRITIONAL DEFICIENCIES; NUTRITIONAL DISORDERS	Schorah, C.J. Bewill, A. Scott, D.L. Morgan, D.B. 1979
2417 Blood, cells	Ingestion		20	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 22.3 ug b) 29.6 ug c) 33.0 ug d) 31.8 ug e) 32.6 ug f) 29.0 ug g) 22.4 ug h) 34.4 ug i) 40.3 ug j) 32.7 ug k) 35.5 ug l) 35.0 ug	a) Males - 0 hr during cold b) Males - 2 hr during cold c) Males - 4 hr during cold d) Males - 0 hr postcold e) Males - 2 hr postcold f) Males - 4 hr postcold g) Females - 0 hr during cold h) Females - 2 hr during cold i) Females - 4 hr during cold j) Females - 0 hr postcold k) Females - 2 hr postcold l) Females - 4 hr postcold Concentrations per 10(E+8) cells during and 24 days after cold following 2000 mg ascorbic acid with 600 mg aspirin. 12 male and 8 female university students aged 19-23 yr, with symptoms of common cold. No subjects had allergy symptoms or had taken drugs or vitamin C. DRUGS; VITAMINS; BLOOD PLASMA; LEUKOCYTES; URINE; DISEASES; ADULTS; SEX; IRELAND	Wilson, C.W.M. Greene, M. 1978
2418 Blood, cells	Ingestion		18	a) 4-40 ug/10(E+8) cells b) 7-50 ug/10(E+8) cells c) 5-85 ug/10(E+8) cells d) 56-90 ug/10(E+8) cells	a) 24.0 ug/10(E+8) cells b) 25.8 ug/10(E+8) cells c) 22.0 ug/10(E+8) cells d) 65.5 ug/10(E+8) cells	a) Pretrial levels, placebo group b) Placebo group after 1 mo c) Pretrial levels, ascorbic acid group d) After 1 mo on 2?500 mg/day Values are for leucocytes. Surgical patients ages 54-88 yr each with pressure sores and various clinical ailments. Ascorbic acid caused a mean reduction in pressure sores of 84% in 1 mo, compared to 42.7% in controls. VITAMINS; UNITED KINGDOM; ADULTS; SKIN DISEASES	Taylor, T.V. Rieser, S. Day, B. Butcher, J. Dysock, I.W. 1974

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L-Ascorbic acid
50-81-7
C6-H8-O6
MW 176.12, MP 190-192 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2419 Blood, plasma	Ingestion		a) 31 b) 111 c) 32 d) 32	a) 0.31-2.1 mg/dl b) 0.07-0.51 mg/dl c) 0.10-0.45 mg/dl d) 0.68-1.42 mg/dl	a) 1.03 mg/dl b) 0.19 mg/dl c) 0.22 mg/dl d) 1.06 mg/dl	a) Controls, ages 19-55 b) Controls, ages 59-97 (long-stay geriatrics) c) Geriatric patients before Vitamin C therapy d) Geriatric patients at 1 g/day, 4 wk Data given for placebo groups. Long-stay patients, ages 59-97, in 2 geriatric hospitals in England. 46 blood-donor controls, ages 19-55. Clinical improvements and weight gains in the Vitamin C group. VITAMINS; AGE; UNITED KINGDOM; DISEASES; LEUKOCYTES; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; DIETS; NUTRITIONAL DEFICIENCIES; NUTRITIONAL DISORDERS	Schorah, C.J. Nevill, A. Scott, D.L. Morgan, D.B. 1979
2420 Blood, plasma	Ingestion		20	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given	a) 1.0 mg/100 ml b) 4.8 mg/100 ml c) 2.7 mg/100 ml d) 1.1 mg/100 ml e) 2.6 mg/100 ml f) 2.6 mg/100 ml g) 1.3 mg/100 ml h) 3.0 mg/100 ml i) 3.1 mg/100 ml j) 1.3 mg/100 ml k) 3.0 mg/100 ml l) 3.2 mg/100 ml	a) Males - 0 hr during cold b) Males - 2 hr during cold c) Males - 4 hr during cold d) Males - 0 hr postcold e) Males - 2 hr postcold f) Males - 4 hr postcold g) Females - 0 hr during cold h) Females - 2 hr during cold i) Females - 4 hr during cold j) Females - 0 hr postcold k) Females - 2 hr postcold l) Females - 4 hr postcold During and 24 days after cold following 2000 mg ascorbic acid with 600 mg aspirin. 12 male and 8 female university students aged 19-23 yr, with symptoms of common cold. No subjects had allergy symptoms or had taken drugs or vitamin C. DRUGS; VITAMINS; BLOOD PLASMA; LEUKOCYTES; URINE; DISEASES; ADULTS; SPE; IRELAND	Wilson, C.W.M. Greene, H. 1978
2421 Blood, plasma	Ingestion		a) 22 b) 12	a) Not given b) Not given	a) 0.71 mg/100 ml b) 0.42 mg/100 ml	a) 19-63 yr of age b) 69-89 yr of age Values are means adjusted for daily intake. Means show 0.06 mg/100 ml decline for every 10 yr of age ($P < 0.05$). Young and elderly nuns from same convent. VITAMINS; UNITED KINGDOM; COMPARATIVE EVALUATIONS; BLOOD PLASMA	Burr, M.L. Sweetnam, P.M. Hurley, R.J. Powell, G.M. 1976

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2422 Urine	Ingestion		20	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 6.3 mg/100 ml b) 40.8 mg/100 ml c) 5.0 mg/100 ml d) 39.8 mg/100 ml e) 6.3 mg/100 ml f) 47.6 mg/100 ml g) 4.5 mg/100 ml h) 43.7 mg/100 ml	a) Males - resting during cold b) Males - 4 hr during cold c) Males - resting postcold d) Males - 4 hr postcold e) Females - resting during cold f) Females - 4 hr during cold g) Females - resting postcold h) Females - 4 hr postcold During and 24 days after cold following 2000 mg ascorbic acid with 600 mg aspirin. 12 male and 8 female university students aged 19-23 yr, with symptoms of common cold. No subjects had allergy symptoms or had taken drugs or vitamin C. DRUGS; VITAMINS; BLOOD PLASMA; LEUKOCYTES; URINE; DISEASES; ADULTS; SEX; IRELAND	Wilson, C.W.M. Greene, H. 1978

L-threo-D-galacto-Octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-(1-methyl-4-propyl-L-2-pyrrolidinecarboxamido)-1-thio-, trans- alpha- (8 CI)
L-threo-alpha-D-galacto-Octopyranoside, methyl 7-chloro-6,7,8-trideoxy-6-(((1-methyl-4-propyl-2-pyrrolidinyl)carbonyl)amino)-1-thio-, (2S-trans)- (9 CI)
18323-44-9
C18-H33-Cl-N2-O5-S
MW 424.98, MP Hydrochloride hydrate 141-143 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2423 Blood, serum	Ingestion	Microbiological	16	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2.48 ug/ml b) 0.70 ug/ml c) 0.81 ug/ml d) 0.73 ug/ml e) 0.74 ug/ml f) 0.30 ug/ml	a) 1.0 hr (peak) b) 6.0 hr c) 0.33 hr d) 1.0 hr e) 6.0 hr f) 14.0 hr 150-mg dose (a-b) Also given with kaolin-pectin suspension (c-f). Healthy adults aged 23-51 yr (mean 29), average wt 69 kg. DRUGS; ANTIBIOTICS; BLOOD SERUM; MICHIGAN; ADULTS	Albert, K.S. DeSante, K.A. Welch, R.D. DiSanto, A.R. 1978

Lanthanum
7439-91-0
La
AtW 138.906, MP 920 C, BP 3454 C, VP 3230 mm Hg at 400 C, 3820 mm Hg at 760 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2424 Hair		NA	11	0.13-1.11 ppm	0.58 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977

Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2425 Adipose		Dithizone	43	Not given	0.08 ppm wet wt	Adipose Samples of perirenal fat from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2426 Adrenal gland		Dithizone	41	Not given	0.25 ppm wet wt	Levels decreased with increasing age. Samples from autopsies from 6 Cincinnati area (1969-1971) of white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2427 Amniotic fluid		AAS	1	Not applicable	< 2 ug/dl	20 days before delivery Pregnant 20 yr old, in 3rd trimester, with sandpaper and torch removed paint from house. 3200 gm female born after 40 wk gestation. Mother had Pb poisoning 20 days before delivery. Development of infant normal at 10 mo, but at 12 mo child was at 8-12 mo in cognitive skills. METALS; LEAD; BLOOD; AMNIOTIC FLUID; LEAD POISONING; INFANTS; ADULTS; FETUS; PAINTS	Singh, N. Donovan, C.M. Hanshaw, J.B. 1978
2428 Amniotic fluid	Ingestion		1	Not applicable	80 ug/l	Sample obtained during amniocentesis Newborn female and her 17-yr-old mother who had eaten paint chips during the last months of pregnancy. Mother: pain in lower extremities for 3 wk, diagnosis of lead poisoning. Mother: some basophilic stippling of RBCs Infant: bone and WBC signs of elevated lead. LEAD; METALS; NEW YORK; METAL POISONING; LEAD POISONING; PREGNANCY; INFANTS; NEWBORN; AMNIOTIC FLUID; BLOOD; PICA; UMBILICAL CORD	Timpo, A.E. Amin, J.S. Canalino, M.B. Yuceoglu, A.M. 1979

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2429 Aorta		X-ray spectrom	5	Not given	8.39 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2430 Aorta		Dithizone	45	Not given	1.65 ppm wet wt	Overall levels increased slowly to age 50, then increased more rapidly. Levels > 2 ppm associated with severe atherosclerosis. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2431 Bladder		Dithizone	43	Not given	0.09 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2432 Blood		AAS	305	0.2-5.3 umoles/l	Not given	Danish men occupationally exposed to Pb. PROTOPORPHYRINS; LEAD; OCCUPATIONAL HAZARDS; MEASUREMENT METHODS; BLOOD; HEMOGLOBINS; METABOLITES; DENMARK; ADULTS	Grandjean, P. 1979
2433 Blood			64	>60 ug/dl	Not given	Children with anemia. 38 of 64 hemoglobins <11 g/dl, 3 of 38 had normal serum iron levels. Patients at Milwaukee Children's Hospital. LEAD; IRON; HEMOGLOBINS; PROTEINS; METALS; BLOOD; BLOOD SERUM; LEAD POISONING; METAL POISONING; CHILDREN; WISCONSIN	Szold, P.D. 1978

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2434 Blood		AAS	a) 74 b) 73	a) 13.1-20.2 ug % b) 16.3-22.4 ug % Range of means	a) Not given b) Not given	a) Suburban students b) Urban students Significant correlation of blood Pb and Pb in exterior dust tracked into the home. Little or no correlation with air Pb, interior dust, food or water. No correlation with gross availability of flaking paint. Students, aged 10-18 yr, residents of Omaha, NE METALS; LEAD; BLOOD; DUST; SOILS; CHILDREN; NEBRASKA; AIR POLLUTION; WATER POLLUTION	Angle, C.A. McIntire, M.S. Colucci, A.V. 1974
2435 Blood			28	16-51 ug/dl	26.9 ug/dl	Iron workers exposed to lead oxide. More data available. Iron workers repairing an elevated railroad network in New York City. LEAD; ZINC; METALS; TRACE ELEMENTS; PROTEINS; BLOOD; OCCUPATIONAL HAZARDS; NEW YORK	Fischbein, A. Lilis, R. 1977
2436 Blood		Colorimetry	a) 57 b) 24 c) 52 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 93.62 ug% b) 52.63 ug% c) 56.47 ug% d) 48.23 ug%	a) Exposed smelter workers b) Smelter worker controls c) Exposed miners d) Miner controls Workers in lead smelting plant and lead miners in Brazil. Lead poisoning symptoms in 'exposed' and 'control' groups. Possible masking of symptoms by parasitosis in majority of both groups. 'Exposed' and 'controls' had hemoglobin and hematocrit levels below those considered normal in developed areas. LEAD; METALS; BLOOD; INDUSTRIAL POLLUTION; MINING; SMELTERS; BRAZIL; INDUSTRIAL DISEASES; METAL POISONING; INFECTION	Mendes, R. 1977
2437 Blood	Ingestion	AAS	a) 32 b) 70 c) 18	a) Not given b) Not given c) Not given	a) 24.5 ug/100 ml b) 41.5 ug/100 ml c) 58.7 ug/100 ml	a) 72% currently or previously in "poor" housing b) 88% currently or previously in "poor" housing c) 96% currently or previously in "poor" housing Winter Levels "Poor" housing: peeling paint and/or broken plaster Rise in blood Pb of 10 ug/100 ml or greater from winter to summer predictable in children under 3 yr and/or those exposed to paint or plaster. Other data and statistics available. 70% Black, 29% Spanish-American, 73% from families on welfare Ages 10 mo - 12 yr. AGE; CHILDREN; BLOOD; LEAD; METALS; NUTRITIONAL DISORDERS; PICA; PAINTS; NEW YORK	McCusker, J. 1979

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2438 Blood	Ingestion	AAS	a) 15 b) 16 c) 12	a) 12-29 ug/100 ml b) 30-49 ug/100 ml c) 50-67 ug/100 ml	a) Not given b) Not given c) Not given	a) 56% exhibited pica b) 94% exhibited pica c) 93% exhibited pica Inverse correlation between Ca intake and blood Pb. 43 children, 1-6 yr old from section of Milwaukee, Wisconsin containing 95% of the Pb poisoning cases. 35 Blacks, 4 Mexican Americans, 3 Caucasians, 1 Puerto Rican. Many households had paint with high Pb. Relative decrease in height percentile with increasing blood Pb. None of subjects treated for Pb toxicity. PICA; LEAD POISONING; PAINTS; NUTRITIONAL DEFICIENCIES; TRACE ELEMENTS; ZINC; BLOOD; DIETS; CHILDREN; WISCONSIN; METALS	Johnson, M.E. Tenuta, K. 1979
2439 Blood		AAS	661	12-73 ug/100 ml	Not given	Children, outpatients in Montreal, Canada, most 3-7 yr old. METALS; LEAD; BLOOD; CHILDREN; CANADA	Mehkeri, K.A. Romanowski, H. Smallbone, B. 1976
2440 Blood		AAS	a) 37 b) 14 c) 92	a) 19.7-41.1 ug/100 ml b) 14.9-27.6 ug/100 ml c) 4.7-15.6 ug/100 ml	a) 30.1 ug/100 ml b) 21.1 ug/100 ml c) 9.4 ug/100 ml	a) Children at school < 1 km from smelter b) Children at school 2.5 km from smelter c) Children at school in rural nonindustrialized area. Belgium children, ages 10-15 yr. METALS; LEAD; BLOOD; SMELTERS; CHILDREN; ADOLESCENTS; BELGIUM; INDUSTRIAL AREAS; RURAL AREAS	Roels, H. Buchet, J. Lauwerys, R. Hubermont, G. Bruaux, P. Claeys-Thoreau, F. Lafontaine, A. Overschelde, J.V. 1976
2441 Blood		AAS	a) 30 b) 32 c) 20	a) 5.0-10.2 ug/dl b) 9.0-17.0 ug/dl c) 18.5-36.5 ug/dl	a) 8.3 ug/dl b) 12.8 ug/dl c) 26.5 ug/dl	a) Rural population, minimal exposure b) Urban dwellers, no occupational exposure c) Individuals, moderate occupational exposure 10 families (parents with 1 child) from village north of Tokyo, 10 families (parents with 1-2 children) from urban Tokyo, 20 male lens-manufacturers in Tokyo. No clinical evidence of Pb poisoning. METALS; LEAD; BLOOD; LEAD POISONING; ERYTHROCYTES; ENZYMES; ADULTS; CHILDREN; JAPAN; OCCUPATIONAL HAZARDS; RURAL AREAS; URBAN AREAS	Wada, O. Takeo, K. Yano, Y. Tetsu, O. Nagahashi, H. Seki, M. 1976

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2462 Blood			1	Not applicable	33 ug/100 g	August 1977 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; ZINC; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.D. Bozian, R.C. 1979
2463 Blood		AAS	a) 57 b) 51 c) 45 d) 43 e) 29 f) 19 g) 17 h) 58 i) 37 j) 13 k) 111 l) 36 m) 8 n) 7 o) 58 p) 23 q) 11 r) 3	a) Not given b) Not given c) Not given d) Not given e) 74-191 ppb f) 97-249 ppb g) 123-327 ppb h) 58-383 ppb i) 85-262 ppb j) 148-772 ppb k) 101-900 ppb l) Not given m) Not given n) Not given o) Not given p) Not given q) Not given r) Not given	a) 138 ppb b) 112 ppb c) 130 ppb d) 143 ppb e) 119 ppb f) 155 ppb g) 196 ppb h) 187 ppb i) 119 ppb j) Not given k) Not given l) 127 ppb m) 138 ppb n) 163 ppb o) 128 ppb p) 138 ppb q) 158 ppb r) 190 ppb	a) Males b) Females not using oral contraceptives c) Females using oral contraceptives d) Male students of similar age e) 0-3 yr old hospital patients f) 4-6 yr old hospital patients g) Residents <1 km from secondary Pb smelter and aged 2-3 yr h) Residents 1-2 km from secondary Pb smelter and aged 2-3 yr i) Residents >2 km from secondary Pb smelter and aged 2-3 yr j) Workers, car factory k) Workers, secondary Pb smelter l) Nonsmoking males m) Male smokers: 1-9 cigarettes/day n) Male smokers: 10-19 cigarettes/day o) Nonsmoking females p) Female smokers: 1-9 cigarettes/day q) Female smokers 10-19 cigarettes/day r) Female smokers: 20 or more cigarettes/day Dutch subjects aged 2 mo or older. METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SERUM; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SMELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Zielhuis, R.L. del Castilho, P. Herber, R.F.M. Wibowo, A.A.E. 1978
2464 Blood						Review MAGNESIUM; LEAD; ZINC; METALS; TRACE ELEMENTS; DRINKING WATER; BLOOD; BLOOD SERUM; HEART; BONES; UNITED KINGDOM; CANADA; UNITED STATES; FINLAND	Sharrett, A.R. 1977
2465 Blood		AAS	18	33-68 ug/100 ml	Not given	Children ages 13-67 mo. Values correlated with erythrocyte protoporphyrin but not with urinary ALA, urinary Pb, or chelatable Pb. Children in prospective screening program at J.F. Kennedy Institute in 1972. LEAD; LEAD POISONING; METALS; METAL POISONING; COMPARATIVE EVALUATIONS; MARYLAND; MEASUREMENT METHODS	Chisolm, J.J., Jr. Barrett, M.B. Harrison, H.V. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1161 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2986 Blood		AAS	a) 172 b) 199 c) 191 d) 162 e) 194 f) 86	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 98.8% b) 75% c) 28% d) 26% e) 12% f) 1-2%	a) 0-1.6 km b) 1.6-8.0 km c) 8.0-16.0 km d) 16.0-24.0 km e) 24.0-32.0 km f) Control (72 km) Values are % with 40 ug/dl Pb or higher by distance from smelter. Blood Cd, Sb, and As not correlated with distance from smelter. Children living near a primary lead smelter, and controls, all 1-9 yr of age. No frank neurologic abnormalities in 202 studied. Free erythrocyte protoporphyrin correlated and hematocrit negatively correlated with blood lead. No pathologic nerve conduction velocities. LEAD; IDAHO; CHILDREN; COMPARATIVE EVALUATIONS; BLOOD; ANEMIA; NEUROLOGIC MANIFESTATIONS	Landrigan, P.J. Baker, E.L., Jr. Feldman, R.G. Cox, D.H. Eden, K.V. Orenstein, W.A. Mather, J.A. Yankel, A.J. von Lindern, I.H. 1976
2987 Blood		AAS	a) 53 b) 85	a) 10-78 ug/100 ml b) Not given	a) 26 + or - 11 ug/100 ml b) 10 + or - 2 ug/100 ml	a) Occupationally exposed to Pb b) Controls Log erythrocyte ALA-dehydratase inversely correlated with blood Pb. Log erythrocyte Protoporphyrin directly related to blood Pb. No difference mean urinary ALA, exposed versus controls. Workers occupationally exposed to lead in a polyvinyl chloride factory for 3-10 yr. Healthy unexposed controls. LEAD; JAPAN; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; BLOOD; METALS	Tomokuni, K. Ogata, M. 1976
2988 Blood		AAS	a) 22 b) 37	a) 0.5-1.3 umol/l b) 0.6-0.2 umol/l	a) 0.8 umol/l b) 2.2 umol/l Medians.	a) Controls, no known occupational exposure b) Occupational exposure from 1 month to 25 yr. Controls, aged 18-44 yr, employed in mill processing edible oils and fatty acids. Exposed factory workers, aged 18-50 yr, employed in battery factory, radiator repair shop, lead-rolling mill, cable manufacturing. Psychological tests of exposed group: difficulty in transferring material from short-term to long term memory, depressed psychomotor speed, some impairment of cognitive functions. METALS; LEAD; BLOOD; HAIR; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; EXPERIMENTAL PSYCHOLOGY; ADULTS; DENMARK	Grandjean, P. Arnvig, E. Beckmann, J. 1978

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Lead
7439-92-1
Pb
At# 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2449 Blood		AAS	7	71-138 ug/100 ml	99.7 ug/100 ml	All had clinical signs of Pb poisoning. Employees of ship-wrecking yard in Goteborg, Sweden, for 6 wk-20 yr, aged 26-66 yr. Weight loss, abdominal pain, constipation and/or diarrhea, fatigue, cramps, vomiting METALS; LEAD; BLOOD; URINE; ADULTS; OCCUPATIONAL HAZARDS; CASE HISTORIES; SWEDEN	Cramer, K. Goyer, R.A. Jagenburg, R. Wilson, H.M. 1974
2450 Blood	Ingestion		1	Not applicable	80 ug/dl	<6 mo old infant admitted to hospital in NY City. Seizures, listlessness, poor feeding, focal slowing and rare sharp waves in left postero-lateral area as shown by electroencephalogram, irritability Basophilic stippling of red blood cells, elevated free erythrocyte protoporphyrin METALS; LEAD; BLOOD; INFANTS; NEW YORK	Sitarz, A.L. 1975
2451 Blood	Ingestion		1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 70 ug/100 ml b) 114 ug/100 ml c) 79 ug/100 ml d) 72 ug/100 ml	a) Time of admission b) 20 months after admission c) 28 months after admission d) 36 months after admission Black woman aged 46 yr from Jersey City, NJ Pulse rate of 106/min, grade II/VI midsystolic ejection murmur, grand mal seizure Anemia, Encephalopathy, lead nephropathy, vitiligo and hyperpigmentation of gums, pale conjectivae, uterus enlarged with fibromyomata. LEAD; IRON; METALS; BLOOD; BLOOD SERUM; LEAD POISONING; ANEMIA; NEW JERSEY; NEUROLOGIC MANIFESTATIONS; NERVOUS SYSTEM DISEASES; URINE	Wedeen, R.P. Mallik, D.K. Batuman, V. Bogden, J.D. 1978
2452 Blood	Ingestion		1	96-120 ug/100 ml	108 ug/100 ml	Patient aged 24 living in Britain had purchased aphrodisiacs from Bangladesh. Constipation, precordial pain, generalized pain, colicky loin pain, nausea, and vomiting Intestinal ileus, sideroblastic anemia LEAD; METALS; LEAD POISONING; UNITED KINGDOM; BLOOD; URINE; BLOOD SERUM	Brearley, R.L. Forsythe, A.M. 1978

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1169 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2453 Blood	Inhalation		a) 1 b) 1 c) 84	a) 36-119 ug/dl b) 40-177 ug/dl c) <10-50 ug/dl	a) Not given b) Not given c) Not given	a) Patient 1 admitted to hospital 3 times in 11 months. Maximum value and death followed third admission b) Patient 2 admitted to hospital twice c) Canadian Indian children Patients 1 and 2, 14 and 16 yr old males, respectively, with history of frequent gasoline sniffing, from Shamattawa Indian Reservation in Northeastern Manitoba, Canada. Children aged 9-17 yr from Little Grand Rapids Indian reservation in Eastern Manitoba, Canada, with history of multiple major social problems. Disorientation, tremors, ataxic gait, hallucinations, sleeplessness, hypotension, apnea, fever, cardiac arrest Basophilic stippling of RBC'S METALS; LEAD; GASOLINE; LEAD ORGANIC COMPOUNDS; LEAD COMPOUNDS; BLOOD; METAL POISONING; LEAD POISONING; DRUG ABUSE; CASE HISTORIES; ADOLESCENTS; CHILDREN; CANADA	Boeckx, R.L. Postl, B. Coodin, F.J. 1977
2454 Blood		AAS ASV	20	70-140 ug/100 ml	Not given	Minor neurolcgical and histological abnormalities noted had little relation to blood lead levels. Workers in lead smelting and refining plant in Denmark. 1 with history of chronic exposure had colic and high blood lead, and low hemoglobin, plus signs of lead neuropathy. Neurological abnormalities below point of neuropathy, found in 7 of 20 men. Slight increase in fibers with paranodal remyelination. Some internodes of small diameter, possibly marking onset of primary demyelination or of axonal damage. BLOOD; DENMARK; LEAD; METALS; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; SMELTERS	Buchthal, F. Behse, F. 1979

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Lead
7439-92-1
Pb
At# 207.2, BP 327.4 C, SP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2855 Blood	Inhalation	AAS	a) Not given b) Not given c) Not given d) 40-64 e) 23 f) 23	a) 53-74 ug/dl b) 44-77 ug/dl c) 29-43 ug/dl d) < 40-87 ug/dl e) less than 20 to > or = 60 ug/dl f) less than 20 to > or = 60 ug/dl	a) 60 ug/dl b) 56 ug/dl c) 35 ug/dl d) Not given e) 31.9 ug/dl f) 41.2 ug/dl	a) Firing range 1 instructors b) Firing range 2 instructors c) Firing range 3 instructors d) Firearms instructors e) Firearms instructors, after outdoor training period f) Firearms instructors, after indoor training period Employees of law enforcement agencies in New York, mean age 40.3 yr, mean duration of employment 6.6 yr. Headache, dizziness, fatigue, weakness, nervousness, hyperirritability, and sleep disturbances. Loss of appetite, weight loss, abdominal discomfort and pain. LEAD; OCCUPATIONAL HAZARDS; METALS; CENTRAL NERVOUS SYSTEM DISEASES; GASTROINTESTINAL SYSTEM; BLOOD; PROTOPORPHYRINS; NEW YORK	Fischbein, A. Rice, C. Sarkozi, L. Kon, S.H. Pectrocci, M. Selikoff, I.J. 1979
2856 Blood			215	47-471 ug/dl	Not given	Levels detected between 1966 and 1972. No correlation, in 47 cases tested 2-8 yr later, between Pb poisoning and certain mental traits. Patients detected through screening of high risk neighborhoods when 14-72 mo of age (mean-30 mo) Sibling controls. 18 patients with levels above 127 ug/dl suffered from vomiting, drowsiness, irritability or ataxia. METALS; LEAD; LEAD POISONING; COMPARATIVE EVALUATIONS; NEUROLOGIC MANIFESTATIONS; CHILDREN; INFANTS; BLOOD; ILLINOIS	Sachs, H.K. Krall, V. McCaughran, D.A. Rosenfeld, I.H. Youngsmith, M. Grove, G. Lazar, B.S. Mover, L. O'Connell, L. Rayson, B. 1978
2857 Blood		Dithizone	43	Not given	0.21 ppm wet wt	Some decrease in mean levels with increasing age. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2458 Blood			a) 1 b) 1 c) 56 d) 56	a) Not applicable b) Not applicable c) 10-30 ug/dl d) 10-32 ug/dl	a) 35 ug/dl b) 13 ug/dl c) 17.3 ug/dl d) 17.2 ug/dl	a) 6-mo-old exposed to newsprint log-burning b) Mother of 6-mo-old c) Control infants 0-6 mo of age d) Control mothers Room dust lead levels related to newsprint log-burning. 6-mo-old breast-fed baby and mother. Control infants and mothers in the same community. Marked elevation in erythrocyte prophyrin. LEAD; LEAD POISONING; NEW YORK; BLOOD; COMPARATIVE EVALUATIONS; METALS; METAL POISONING	Perkins, K.C. Oski, F.A. 1976
2459 Blood		AAS	133	2.5-52.5 ug/100 ml	12.4 ug/100 ml	No occupational exposure. City workers had significantly elevated blood Pb. Other correlations are presented. Healthy donors of transfusion blood during July-September of 1974. LEAD; METALS; BLOOD; AUSTRALIA; COMPARATIVE EVALUATIONS	Mencel, S.J. Thorp, R.H. 1976
2460 Blood	Ingestion		2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) 21-49 ug/dl	a) 86 ug/dl b) 41 ug/dl c) 26 ug/dl d) 60 ug/dl e) 72 ug/dl f) Not given	a) Mother before chelation therapy b) Mother after 2 days chelation therapy c) Mother at discharge, after delivery d) Cord blood e) Infant at 14 days f) Infant range for 3-18 mo with 2 periods of chelation therapy Newborn female and her 17-yr-old mother who had eaten paint chips during the last months of pregnancy Mother: pain in lower extremities for 3 wk, diagnosis of lead poisoning. Mother: some basophilic stippling of RBCs Infant: bone and RBC signs of elevated lead. LEAD; METALS; NEW YORK; METAL POISONING; LEAD POISONING; PREGNANCY; INFANTS; NEWBORN; AMNIOTIC FLUID; BLOOD; PICA; UMBILICAL CORD	Timpo, A.E. Amin, J.S. Casalino, M.B. Yaceoglu, A.H. 1979
2461 Blood	Ingestion		98	> 0.5 ug/g	Not given	Levels in 98 of 705 children surveyed. Children in a run-down area of Boston. Lead toxicity noted. Central nervous system effects: hyperactivity, behavior problems, learning disabilities. LEAD; METALS; CHILDREN; BLOOD; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; URBAN AREAS; BEHAVIOR DISORDERS; MASSACHUSETTS	Paneschel, S.N. 1974

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Lead
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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2462 Blood		AAS	a) 3 b) 36 c) 22 d) 1	a) 20-34 ug/100 ml b) 43-87 ug/100 ml c) 48-108 ug/100 ml d) Not applicable	a) 28.6 ug/100 ml b) 57.1 ug/100 ml c) 78.2 ug/100 ml d) 205.2 ug/100 ml	a) Administrators, laboratory technician (air levels, 11.9-17.0 ug/m) b) Workers: maintenance, loading, kitchen, battery assembling & sealing, grid smelting & casting, breaking & drying of plates, miscellaneous (air levels, 23-299 ug/m3) c) Workers: drying, breaking & finishing plates, formation, mixing, powder preparation, oven smelting, pasting & drying, oxide fabrication (air levels, 266-1315 ug/m3) d) Worker doing odd jobs, some evenings spent in factory. Battery factory workers mean age 37.4 (range 19-65), mean seniority 7.0 yr (range 1 mo-26 yr). Fatigue, headache, abdominal cramps, loss of appetite, or nausea reported by 13/26 workers with blood Pb levels of 20-59 ug/100 cc and by 23/35 workers with levels of 60+ ug/100 cc. METALS; LEAD; BLOOD; BIOACCUMULATION; METAL POISONING; OCCUPATIONAL HAZARDS; INDUSTRIAL ATMOSPHERES; ISRAEL	Richter, E.D. Yaffe, Y. Greener, N. 1979
2463 Blood	Dermal	AAS	a) 10 b) 9	a) 10-25 ug/100 ml b) 11-74 ug/100 ml	a) 16.0 ug/100 ml b) 28.22 ug/100 ml	a) Non-exposed b) Exposed Difference between groups was significant. Employees of N.V. SIDMAR steel plant in Ghent, Belgium. METALS; LEAD; BLOOD; OCCUPATIONAL HAZARDS; BELGIUM	van Peteghem, T.H. deTon, H. 1974
2464 Blood		Dithizone	a) 23 b) 42 c) 35 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 74.5 + or - 26 ug/100 ml b) 52.8 + or - 21 ug/100 ml c) 41.0 + or - 12 ug/100 ml d) 23.0 + or - 14 ug/100 ml	a) Pb-poisoned workers b) Workers with moderately increased Pb absorption c) Workers with slightly increased Pb absorption d) Workers with physiologic Pb absorption, polluted environment Groups established on the basis of workers' complaints, clinical examination and toxicological tests. Workers employed 1-23 yr in a Hungarian storage battery plant. None of the cases of chronic Pb poisoning investigated had severe symptoms of colic or encephalopathy. METALS; LEAD; BLOOD; URINE; OCCUPATIONAL HAZARDS; COMPARITIVE EVALUATIONS; SEX; HUNGARY	Lancranjan, I. Popescu, H.I. Gavanescu, O. Klepsch, I. Serbanescu, M. 1975
2465 Blood						Review REVIEW; LEAD; METAL POISONING; CHILDREN; INDUSTRIAL EMISSIONS; PAINTS; NUTRITIONAL DISORDERS; AGE; METALS; BLOOD	McCabe, L.B. 1979

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Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2466 Blood		AAS	30	29-98 ug/100 ml	50.57 ug/100 ml	Adults (28-62 yr) working in refining, cutting or welding of Pb, New Jersey. METALS; LEAD; BLOOD; URINE; OCCUPATIONAL HAZARDS; NEW JERSEY	Vitale, L.F. Joselow, M.M. Wedeen, R.P. Pawlow, M. 1975
2467 Blood			12,000	a) Not given b) Not given c) Not given	a) >60 ug/100 ml b) 135 ug/100 ml c) 86 ug/100 ml	a) Levels in 1 of 4 children tested prior to mass screening and in 3 of 100 during mass screening b) Symptomatic children on admission prior to mass screening c) Symptomatic children on admission during mass screening Children in Newark, NJ. Mean age 3 yr for symptomatic children, 6 yr for asymptomatic during mass screening period. 80% blacks. Absence of mass screening 1967-69, mass screening from 1970. METALS; LEAD; BLOOD; LEAD POISONING; METAL POISONING; CHILDREN; NEW JERSEY	Browder, A. Joselow, M.M. Louria, D.B. Lavenhar, M. Foster, J. 1974
2468 Blood		AAS	a) 88 b) 130	a) Not given b) Not given	a) 0.91 + or - 0.77 ug/g b) 0.58 + or - 0.93 ug/g	a) Maternal b) Fetal Dry wt basis. Maternal levels elevated by factor of 2-3 in late autumn and early winter. Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, W. Mansour, H. Schaffner, W. Hoffman, L. Davies, J. 1974
2469 Blood		AAS	a) 73 b) 36	a) 0-68.5 ug/100 ml b) 0-7.5 ug/100 ml	a) 18.4 + or - 12.9 ug/100 ml b) 4.0 ug/100 ml	a) Occupationally exposed b) Controls Workers exposed to Pb 2-15 yr in a polyvinyl chloride factory. Controls without occupational exposure. LEAD; METALS; JAPAN; OCCUPATIONAL HAZARDS; BLOOD; URINE; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS; ENZYMES; ADULTS	Tomokuni, K. 1974
2470 Blood			a) 39 b) 20 c) 100 d) 22	a) 36-89 ug/100 ml b) Not given c) Not given d) 28-82 ug/100 ml	a) 62.1 + or - 13.8 ug/100 ml b) 70 + or - 10.6 ug/100 ml c) 16 + or - 5.5 ug/100 ml d) 46.0 + or - 18.9 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Occupationally exposed battery workers, before treatment with zinc and vitamin C c) Controls d) Storage battery workers after 24 wk treatment with zinc and vitamin C Workers, aged 28-60 yr, in battery plant from 4-34 yr. 100 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBINS; URINE; DIETS; VITAMIN C	Papaioannou, E. Sohler, A. Pfeiffer, C.C. 1978

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2471 Blood		AAS	a) 84 b) 69 c) 162	a) < 30 - greater than 40 ug/100 ml b) < 30 - greater than 40 ug/100 ml c) < 30 - greater than 40 ug/100 ml	a) 33 ug/100 ml b) 26 ug/100 ml c) 24 ug/100 ml	a) Migrant farmworker children b) Non-farmworker children, Medicaid enrolled c) Non-farmworker children, not Medicaid enrolled Levels in farmworker boys have higher farmworker girls (35 and 28 ug/100 ml, respectively) BLOOD; CHILDREN; FARMS; LEAD; NEW YORK	Perrin, J.M. Merkens, M.J. 1979
2472 Blood	Ingestion		a) 56 b) 60 c) 50 d) 50	a) 0.9-3.3 umol/l b) 1.0-3.2 umol/l c) 0.3-2.0 umol/l d) 0.4-2.2 umol/l	1.9 umol/l 1.9 umol/l 0.7 umol/l 0.8 umol/l Medians	a) Adult females in houses with lead water pipes b) Children in houses with lead water pipes c) Adult females in houses with copper water pipes d) Children in houses with copper water pipes Levels fell to normal within 6 months of removal of lead pipes. BLOOD; CHILDREN; DRINKING WATER; ADULTS; COPPER; LEAD; UNITED KINGDOM	Thomas, H.F. Elwood, P.C. Welsby, E. St. Leger, A.S. 1979
2473 Blood		AAS	1589	17.5-33.6 ug/100 ml	Not given	Range of means after factorial grouping by age, sex, and blood glucose-6-PO4 dehydrogenase status. Peaks at 1-3 yr of age (29.1 ug/100 ml) and 6 yr (28.1 ug/100 ml). Effects of other variables assessed. Black children of South Philadelphia examined from July 1972 to March 1973 at the Children's Hospital. Significant depression of hematocrit and hemoglobin with increasing blood lead in the 1-3 yr olds only. LEAD; PENNSYLVANIA; CHILDREN; BLOOD; METALS; HEMOGLOBINS; RACIAL STUDIES; SEX; AGE; ENZYMES; URBAN AREAS	Adebonojo, F.O. 1974
2474 Blood	Inhalation	AAS	1	a) Not applicable b) Not applicable	a) 67 ug/100 ml b) 40 ug/100 ml	a) While lead-base-painted wood was burned for heat b) After chelation therapy, and cessation of burning of painted wood 5 yr old white male No symptoms of lead poisoning LEAD; BLOOD; CHILDREN; METALS; PAINTS	DeCastro, F.J. Lazzara, J. Rolfe, U.T. Engeler, E. 1975
2475 Blood			8	29-98 ug/100 ml	52.6 ug/100 ml	Initial Pb screening Pb workers chosen for study after screening tests suggested excessive body burdens. Two hospitalized with lead colic. Exposure: 3-6 yr. Ages 28-50 yr. Two subjects: lead colic 3 subjects: preclinical Pb nephropathy. LEAD; METALS; METAL POISONING; LEAD POISONING; BLOOD; URINE; OCCUPATIONAL HAZARDS; MINERAL METABOLISM	Wedeen, R.P. Maesaka, J.K. Weiner, B. Lipat, G.A. Lyons, M.M. Vitale, L.F. Joselow, M.M. 1975

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2476 Blood	Dermal		1	a) Not given b) Not given c) Not given	a) 2.8 umoles/l b) 3.0 umoles/l c) 3.4 umoles/l	a) 1976, surma contained 86% Pb (W/W) b) 1977 c) 1978 Regular applications to conjunctival margins. Asian child admitted in 1976 with plumbism attributable to surma. LEAD; CASE HISTORIES; UNITED KINGDOM; BLOOD; COSMETICS; CHILDREN; LEAD POISONING	Aslam, M. Healy, M.A. Davis, S.S. Ali, A.R. 1980
2477 Blood			a) 49 b) 50	a) 60-70 ug/100 ml b) < or = to 29 ug/100 ml	a) Not given b) Not given	a) High-Pb group b) Low-Pb group Groups differed in finger sucking, scathing toys, chewing pencils, eating paint or dirt, prevalence of Pb in interior paint, soil Pb levels, hand surface Pb, and household dust Pb. Children in Rochester, NY area. Ages 18-72 months. Matched for age, area, and social class. LEAD; LEAD POISONING; NEW YORK; DUST; PICA; CHILDREN; BLOOD	Charney, E. Sayre, J. Coulter, M. 1980
2479 Blood	Ingestion	AAS	1041	a) Not given b) Not given	a) >40 ug/100 ml b) >60 ug/100 ml	a) 411 cases, 407 living within 20 mi of smelter b) 152 cases, all living within 20 mi of smelter Concentration varied inversely with distance from smelter. Children, aged 1-9 yr, living in Idaho Silver Valley, and controls living some distance from Silver Valley. METALS; LEAD; BLOOD; CHILDREN; SMELTERS; PICA; SEX; AGE; SOILS; COMPARATIVE EVALUATIONS; INDUSTRIAL AREAS; IDAHO; POPULATION EXPOSURE	Walter, S.D. Yankel, A.J. von Lindern, I.H. 1980
2479 Blood		APDC-MIBK AAS	9	0.3-2.9 umol/l	1.7 umol/l	levels at examination. Lead workers, 21-63 yr old, being diagnosed and treated for lead poisoning. METALS; LEAD; BLOOD; URINE; COMPARATIVE EVALUATIONS; LEAD POISONING; JAPAN; OCCUPATIONAL HAZARDS	Araki, S. 1980
2480 Blood	Inhalation		a) 10 b) 12 c) 9	a) 10.4-49.7 ug/dl b) 20.7-53.8 ug/ml c) 14.5-51.8 ug/dl	a) 37.28 ug/dl b) 39.33 ug/dl c) 31.06 ug/dl	a) Plant A - atmospheric lead 0.05-0.15 mg/cubic m b) Plant B - atmospheric lead 0.025-0.15 mg/cubic m c) Plant C - atmospheric lead 0.13-0.80 mg/cubic m Employees from can-making plants in the United Kingdom. METALS; LEAD; BLOOD; COMPARATIVE EVALUATIONS; INDUSTRIAL ATMOSPHERES; UNITED KINGDOM	Bishop, J.P. 1980

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2481 Blood, cells		AAS	a) 23 b) 52 c) 23 d) 52	a) Not given b) Not given c) Not given d) Not given	a) 26.0 ug/100 ml b) 26.7 ug/100 ml c) 25.0 ug/100 ml d) 25.7 ug/100 ml	a) Mothers, urban b) Mothers, rural c) Newborn, urban d) Newborn, rural Mothers and newborn in Italy, 23 pairs in Pavia, and 52 pairs in rural areas. LEAD; METALS; NEWBORN; BLOOD; ITALY; UMBILICAL CORD; COMPARATIVE EVALUATIONS	Cavalleri, A. Minoia, C. Pozzoli, L. Polatti, F. Bolis, P.F. 1978
2482 Blood, cells						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2483 Blood, cells		AAS	a) 40 b) 25 c) 23	a) 18.5-41.8 ug/100 ml b) Not given c) Not given	a) 22.61 ug/100 ml b) 31.6 + or - 2.5 ug/100 ml c) 29.5 + or - 2.8 ug/100 ml	a) High school students ages 16-18 yr b) Black males and females ages 10-16 yr in school adjacent to a battery plant c) Black males ages 12-16 yr in schools not near battery plant. LEAD; METALS; BLOOD; BLOOD PLASMA; ERYTHROCYTES; COMPARATIVE EVALUATIONS; ADOLESCENTS	Angle, C.R. McIntire, M.S. 1974
2484 Blood, plasma		AAS	a) 23 b) 52 c) 23 d) 52	a) Not given b) Not given c) Not given d) Not given	a) 0.75 ug/100 ml b) 0.62 ug/100 ml c) 0.62 ug/100 ml d) 0.62 ug/100 ml	a) Mothers, urban b) Mothers, rural c) Newborn, urban d) Newborn, rural Mothers and newborn in Italy, 23 pairs in Pavia, and 52 pairs in rural areas. LEAD; METALS; NEWBORN; BLOOD; ITALY; UMBILICAL CORD; COMPARATIVE EVALUATIONS	Cavalleri, A. Minoia, C. Pozzoli, L. Polatti, F. Bolis, P.F. 1978
2485 Blood, plasma	Dermal	AAS	a) 69 b) 35	a) Not given b) Not given	a) 3.8 ug/100 ml b) 3.6 ug/100 ml	a) Exposed workers b) Controls Cd levels within normal limits. Workers employed at least 1 yr at secondary Pb smelter and controls from nearby Al processing plant in California. METALS; ARSENIC; LEAD; BLOOD; BLOOD PLASMA; HAIR; COMPARATIVE EVALUATIONS; HEARING; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; INDUSTRIES; SMELTERS; CALIFORNIA	Baloh, R.W. Spivey, G.H. Brown, C.P. Morgan, D. Campion, D.S. Browdy, B.L. Valentine, J.L. Gonick, H.C. Massey, F.J. Culver, B.D. 1979
2486 Blood, plasma						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2487 Blood, plasma		AAS	40	4.5-7.2 ug/100 ml	Not given	High school students ages 16-18 yr LEAD; METALS; BLOOD; BLOOD PLASMA; ERYTHROCYTES; COMPARATIVE EVALUATIONS; ADOLESCENTS	Angle, C.R. McIntire, M.S. 1974
2488 Blood, serum						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2489 Blood, whole		AAS	a) 10 b) 6	a) Not given b) Not given	a) 0.12 mg/l b) 0.11 mg/l	a) Ate food contaminated with methylmercury b) Controls Residents of Sweden. METALS; MERCURY; LEAD; SWEDEN; BLOOD; FOOD CONTAMINATION	Skerfving, S. Hansson, K. Mangs, C. Lindsten, J. Ryaan, N. 1974
2490 Blood, whole		AAS	a) 60 b) 30 c) 30	a) 10-60 ug/dl b) 12-38 ug/dl c) 12-40 ug/dl	a) 30 ug/dl b) 20.8 ug/dl c) 20.9 ug/dl	a) Mentally retarded children-etiology unknown b) Controls, normal children c) Controls, mentally retarded children - etiology known Children from Athens, Greece area. LEAD; METALS; MENTAL RETARDATION; LEAD POISONING; BLOOD; ERYTHROCYTES; CHILDREN; GREECE; COMPARATIVE EVALUATIONS	Youroukos, S. Lyberatos, C. Philippidou, A. Gardikas, C. Tsomi, A. 1978
2491 Blood, whole	Ingestion	AAS	1309	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 31.7 ug/100 ml b) 31.1 ug/100 ml c) 30.7 ug/100 ml d) 34.0 ug/100 ml e) 31.5 ug/100 ml f) 31.3 ug/100 ml	a) Lodge Expressway area, males b) Gratiot Avenue area, males c) Grand River Avenue area, males d) Lodge Expressway area, females e) Gratiot Avenue area, females f) Grand River Avenue area, females Areas are at increasing distances from 3 major roadways in Detroit. Higher levels correlated with poor housing and younger age. No correlation between lead levels and distance from highway. Mostly 2-5 yr olds METALS; LEAD; AGE; CHILDREN; SEX; BLOOD; MICHIGAN	Ter Haar, G. Chadzinski, L. 1979
2492 Blood, whole	Dermal	AAS	a) 69 b) 35	a) Not given b) Not given	a) 61.3 ug/100 ml b) 22.0 ug/100 ml	a) Exposed workers b) Controls Cd levels within normal limits. Workers employed at least 1 yr at secondary Pb smelter and controls from nearby Al processing plant in California. METALS; ARSENIC; LEAD; BLOOD; BLOOD PLASMA; HAIR; COMPARATIVE EVALUATIONS; HEARING; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; INDUSTRIES; SMELTERS; CALIFORNIA	Baloh, R.W. Spivey, G.H. Brown, C.P. Morgan, D. Campion, D.S. Browdy, B.L. Valentine, J.L. Gonick, H.C. Ramsey, P.J. Culver, B.D. 1979

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Lead
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Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2493 Blood, whole		AAS	a) 40 b) 75	a) 19.5-81 ug/100 ml b) 19.5-71 ug/100 ml	a) Not given b) Not given	a) 30-35% hematocrit b) 36-42% hematocrit Preschool children from old housing areas in Charleston, SC. METALS; LEAD; BLOOD; CHILDREN; SOUTH CAROLINA	Chisolm, J.J., Jr. Mellits, E.D. Keil, J.E. Barrett, M.B. 1974B
2494 Blood, whole		AAS	2	a) 39-61 ug/dl b) 27-50 ug/dl	a) 50 ug/dl b) 40.6 ug/dl	a) Mother, 6/6/75 to 9/23/75, peak on 8/13/75 and low on 9/23/75 b) Infant, 9/22/75 to 6/17/76, peak at birth (9/22/75) and 10/16/75, and low on 12/9/75. Pregnant 20 yr old, in 3rd trimester, with sandpaper and torch removed paint from house. 3200 gm female born after 40 wk gestation. Mother had Pb poisoning 20 days before delivery. Development of infant normal at 10 mo, but at 12 mo child was at 8-12 mo in cognitive skills. METALS; LEAD; BLOOD; AMNIOTIC FLUID; LEAD POISONING; INFANTS; ADULTS; FETUS; PAINTS	Singh, N. Donovan, C.M. Hanshaw, J.B. 1978
2495 Blood, whole		AAS	a) 11 b) 18 c) 16 d) 13	a) Not given b) Not given c) Not given d) Not given	a) 48.6 ug/dl b) 38.2 ug/dl c) 31.3 ug/dl d) 26.7 ug/dl	a) 0-3 yr old b) 3-6 yr old c) 6-10 yr old d) 10 yr and older Dust samples from homes indicated excessive Pb. Boys and girls (from 10 mo to 15 yr) with at least 1 parent working at battery factory in Raleigh, NC. No symptoms of lead poisoning METALS; LEAD; BLOOD; LEAD POISONING; OCCUPATIONAL HAZARDS; INDUSTRIES; DUST; CHILDREN; NORTH CAROLINA	Dolcourt, J.L. Hamrick, H.J. O'Tuama, L.A. Wooten, J. Baker, E.L. 1978
2496 Blood, whole	Dermal Inhalation	AAS	a) 69 b) 35	a) Slightly <60-slightly >80 ug/dl b) Not given	a) 61.3 ug/dl b) 22.0 ug/dl	a) Smelter workers b) Controls Air levels for Pb, Cd, and As also given. Lead smelter workers, mean age 42.5 yr, mean employment 11.3 yr. Controls, Al workers, mean age 40.7 yr, mean employment 8.4 yr. All from California. METALS; LEAD; ARSENIC; CADMIUM; BLOOD; ADULTS; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; CALIFORNIA	Spivey, G.H. Brown, C.P. Baloh, R.W. Campion, D.S. Valentine, J.L. Massey, F.J. Browdy, B.L. Culver, B.D. 1979

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2497 Blood, whole	Ingestion	AAS	931	a) Not given b) Not given c) Not given d) Not given	a) 24.8 + or - 1.4 ug/dl b) 22.0 + or - 1.4 ug/dl c) 18.0 + or - 1.3 ug/dl d) 21.5 + or - 1.4 ug/dl Geometric means	a) 132 subjects from urban commercial area (near battery plant) b) 589 subjects from urban residential area c) 110 subjects from suburban area d) All subjects Blood levels correlated with air, soil and housedust concentrations Statistical analysis done. Children, 1-8 yr old, from three general areas in Omaha, 1971-1977. Urban subjects mostly black, suburban subjects white. METALS; LEAD; BIOACCUMULATION; ADOLESCENTS; CHILDREN; BLOOD; COMPARATIVE EVALUATIONS; ATMOSPHERE; URBAN AREAS; NEBRASKA	Angle, C.R. McIntire, M.S. 1979
2498 Blood, whole	Ingestion		1	95-136 ug/dl (4.6-6.6 umol/l)	115.5 ug/dl (5.6 umol/nl)	Source of Pb Morgan's perfumed pomade containing "Plumb. acet. 3%" 4-yr-old, with West Indian parents, in habit of putting her fingers into cosmetics and licking them. Erythrocyte protoporphyrin levels averaged 510 ug/dl. METALS; LEAD; METAL POISONING; LEAD POISONING; PROTOPORPHYRINS; BLOOD; ERYTHROCYTES; CHILDREN; UNITED KINGDOM	Waldron, H.A. 1979
2499 Blood, whole						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2500 Blood, whole		AAS	115	10-81 ug/100 ml	39.37 ug/100 ml	Prospective study, Pb significantly related to blood protoporphyrin. Children, ages <1-7 yr, from old housing areas of Charleston, SC. LEAD; BLOOD; CHILDREN; MEASUREMENT METHODS; PROTOPORPHYRINS; SOUTH CAROLINA; METALS	Chisolm, J.J., Jr. Mellits, E.D. Keil, J.E. Barrett, M.B. 1974a
2501 Blood, whole		AAS	40	5.6-27.4 ug/100 ml	Not given	High school students ages 14-18 yr LEAD; METALS; BLOOD; BLOOD PLASMA; ERYTHROCYTES; COMPARATIVE EVALUATIONS; ADOLESCENTS	Angle, C.R. McIntire, M.S. 1974

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Lead
7439-92-1
PB
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2502 Blood, whole	Dermal	AAS	a) 17 b) 178	a) Not given b) Not given	a) 0.799 + or - 0.285 umoles/l b) 0.760 + or - 0.302 umoles/l	a) Regular users b) Non-users Surma, an eye-area cosmetic, contained 5-30% Pb (W/W) (mean 21%). Blood Pb in groups not different, P<0.5. Asian children from 68 families, at the Royal Hospital for Sick Children, Glasgow in 1979. Ages 4 months-18 yr. LEAD; COSMETICS; BLOOD; CHILDREN; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Attenburrow, A.A. Campbell, S. Logan, R.W. Goel, K.M. 1980
2503 Blood, whole		AAS	a) 38 b) 48	a) 0.83-4.00 umoles/l b) 0.58-2.2 umoles/l	a) 2.17 umoles/l b) 1.4 umoles/l	a) Cardiovascular patients b) Normotensive patients No apparent effect of age. Patients with moderate to severe cardiac conditions and/or hypertension. Controls with no known cardiovascular symptoms. All over 30 yr old. METALS; CADMIUM; LEAD; CARDIOVASCULAR DISEASES; UNITED KINGDOM; HYPERTENSION; AGE; ADULTS; SMOKING; COMPARATIVE EVALUATIONS; BLOOD; URINE	Khera, A.K. Wibberley, D.G. Edwards, K.W. Waldron, H.A. 1980
2504 Bone		AAS	a) 9 b) 13 c) 15 d) 68 e) 17	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.6 ug/g b) 1.0 ug/g c) 2.0 ug/g d) 1.2 ug/g e) 5.5 ug/g	a) Specimens from 3300-2900 B.C. b) Specimens from 2000-1600 B.C. c) Specimens from 1650-1350 B.C. d) Specimens from 1-750 A.D. e) Contemporary specimens Values are medians. Samples from excavated skeletons in Sudan or from autopsies in Denmark. Ages 16 to >55 yr. METALS; LEAD; BONES; TEETH; AUTOPSIES; ADOLESCENTS; ADULTS; DENMARK; SUDAN; COMPARATIVE EVALUATIONS	Grandjean, P. Nielsen, O.V. Shapiro, I.M. 1979
2505 Bone						Review MAGNESIUM; LEAD; ZINC; METALS; TRACE ELEMENTS; DRINKING WATER; BLOOD; BLOOD SERUM; HEART; BONES; UNITED KINGDOM; CANADA; UNITED STATES; FINLAND	Sharrett, A.R. 1977

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1162 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2506 Bone		Dithizone	45	a) Not given b) Not given c) Not given d) Not given	a) 14.09 ppm wet wt b) 13.81 ppm wet wt c) 7.14 ppm wet wt d) 4.82 ppm wet wt	a) Tibia b) Skull, 44 of 45 c) Rib d) Vertebrae, 44 of 45 Skull and tibia values increased steadily with age. Ribs and vertebrae leveled off by age 50. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; BRAIN; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2507 Bone		Colorimetry	38	a) 1.8-38.3 ug/g bone ash b) 3.5-25.9 ug/g bone ash c) 0.8-6.7 ug/g bone ash d) 1.7-15.7 ug/g bone ash	a) Not given b) Not given c) Not given d) Not given	a) Ribs, autopsies b) Vertebrae, autopsies c) Ribs, skeletons d) Vertebrae, skeletons Pb increased with age in both groups, except 0 to 2-yr-old skeletons had high levels. 1975 autopsies of 21 individuals, children and adults. 17 skeletons from 600-800 A.D. All from the Bern area. LEAD; BONES; AUTOPSIES; SWITZERLAND; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS; RIBS; VERTEBRAE	Ulrich, L. 1978
2508 Bone						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2509 Brain		APDC-MIBK AAS	10	Not given	<0.18 ug/g wet wt	Autopsies-endogenous levels. LEAD; METALS; LIVER; BRAIN; HEART; SPLEEN; LUNGS; MEASUREMENT METHODS	Farris, F.F. Poklis, A. Griesmann, G.E. 1978
2510 Brain		Dithizone	41	a) Not given b) Not given	a) 0.11 ppm wet wt b) 0.11 ppm wet wt ●	a) Cortical tissue from frontal lobes of cerebrum, 39 of 41 b) Medullary tissue from frontal lobes of cerebrum Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; BRAIN; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
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Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2511 Hair	Dermal	AAS	a) 69 b) 35	a) Not given b) Not given	a) 206.9 ug/g b) 12.3 ug/g	a) Exposed workers b) Controls Cd levels within normal limits. Workers employed at least 1 yr at secondary Pb smelter and controls from nearby Al processing plant in California. METALS; ARSENIC; LEAD; BLOOD; BLOOD PLASMA; HAIR; COMPARATIVE EVALUATIONS; HEARING; NEUROLOGIC MANIFESTATIONS; OCCUPATIONAL HAZARDS; INDUSTRIES; SMELTERS; CALIFORNIA	Baloh, R.W. Spivey, G.H. Brown, C.P. Morgan, D. Campion, D.S. Browdy, B.L. Valentine, J.L. Gonick, H.C. Massey, F.J. Culver, B.D. 1979
2512 Hair		AAS	a) 20 b) 41	a) <5-55 umol/kg b) 5-720 umol/kg	a) 10 umol/kg b) 115 umol/kg Medians.	a) Controls, no known occupational exposure b) Occupational exposure from 1 month to 25 yr Controls, aged 18-44 yr, employed in mill processing edible oils and fatty acids. Exposed factory workers, aged 18-50 yr, employed in battery factory, radiator repair shop, lead-rolling mill, cable manufacturing. Psychological tests of exposed group: difficulty in transferring material from short-term to long term memory, depressed psychomotor speed, some impairment of cognitive functions. METALS; LEAD; BLOOD; HAIR; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; EXPERIMENTAL PSYCHOLOGY; ADULTS; DENMARK	Grandjean, P. Arnvig, E. Beckmann, J. 1978
2513 Hair		AAS	a) 126 b) 90 c) 71 d) 85 e) 77 f) 28 g) 179 h) 108 i) 102 j) 109	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 11.78 ug/g b) 14.07 ug/g c) 17.12 ug/g d) 10.39 ug/g e) 14.50 ug/g f) 12.88 ug/g g) 11.86 ug/g h) 17.52 ug/g i) 13.95 ug/g j) 10.97 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children d) Long Island adults e) Queens adults f) Bronx adults g) Male children h) Female children i) Male adults j) Female adults Significant correlation between hair Pb and the following: dust, community location, and sex. Hair Pb higher in smokers than nonsmokers. Additional data available. Scalp hair, Caucasians in NY, ages <1 to greater than 59 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975

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Lead
7439-92-1
Pb
At# 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2514 Hair		AAS	250	2.0-360 ug/g	12.8 ug/g Geometric mean	Data available for age, sex, and occupational groups. Subjects from community of 60,000 people, ages 1 to 87 yr. METALS; LEAD; HAIR; AGE; SEX; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; NEW ZEALAND	Reeves, R.D. Jolley, K.W. Buckley, P.D. 1975
2515 Hair		AAS	6	1.6-2.4 ppm	2.0 ppm	LEAD; HAIR; METALS; MEASUREMENT METHODS	Seth, T.D. Hasan, M.Z. Sircar, S. 1975
2516 Hair						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2517 Heart		APDC-MIBK AAS	9	Not given	<0.14 ug/g wet wt	Autopsies-endogenous levels. LEAD; METALS; LIVER; BRAIN; HEART; SPLEEN; LUNGS; MEASUREMENT METHODS	Farris, F.F. Poklis, A. Griesmann, G.E. 1978
2518 Heart		Dithizone	83	Not given	0.08 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2519 Intestine		Dithizone	85	a) Not given b) Not given	a) 0.12 ppm wet wt b) 0.07 ppm wet wt	a) Jejunum. Levels decreased with increasing age b) Cecum Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2520 Kidney		X-ray spectros	a) 8 b) 7	a) Not given b) Not given	a) 7.06 ppm dry wt b) 7.85 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2521 Kidney		Dithizone	45	a) Not given b) Not given	a) 0.79 ppm wet wt b) 0.48 ppm wet wt	a) Cortex b) Medulla, 44 of 45 Levels decreased with increasing age. People with nephrosclerotic disease had levels of 0.56 ppm, compared to 0.93 ppm for others. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2522 Kidney		ES	a) 119 b) 52 c) 66	a) Not given b) Not given c) Not given	a) 5.76 ppm b) 4.02 ppm c) 5.07 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different ($P<0.02$), b) and c) different ($P<0.05$) Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2523 Liver		APDC-MIBK AAS	10	Not given	1.61 ug/g wet wt	Autopsies-endogenous levels. LEAD; METALS; LIVER; BRAIN; HEART; SPLEEN; LUNGS; MEASUREMENT METHODS	Farris, F.F. Poklis, A. Griesmann, G.E. 1978
2524 Liver		X-ray spectros	8	Not given	5.83 ppm dry wt	2 samples taken per case. 2 analyses run per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2525 Liver		Dithizone	45	Not given	0.98 ppm wet wt	Levels decreased with increasing age. Livers showing fatty change had mean of 0.63 ppm. Nonfatty liver mean was 1.13 ppm. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2526 Liver		ES	a) 87 b) 43 c) 75	a) Not given b) Not given c) Not given	a) 9.81 ppm b) 13.7 ppm c) 11.3 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different, P<0.05 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; ECTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2527 Lung		APDC-MIBK AAS	10	Not given	0.24 ug/g wet wt	Autopsies-endogenous levels. LEAD; METALS; LIVER; BRAIN; HEART; SPLEEN; LUNGS; MEASUREMENT METHODS	Farris, F.F. Poklis, A. Griesmann, G.E. 1978
2528 Lung		ES	30	Not detectable-46.5 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967
2529 Lung		Dithizone	20	Not given	4.6 ug/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2530 Lung		Dithizone	66	2.9-8.6 ug/g dry wt	3.8 ug/g dry wt	Sections of lungs from deceased coal miners from Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
2531 Lung		Dithizone	66	2.9-8.6 ug/g dry wt	3.8 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Liatiaca, L.P. Morris, H.B. Holtz, J.L. Hauer, P. Wolowicz, F.R. 1971
2532 Lung		Dithizone	42	Not given	0.36 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2533 Muscle		Dithizone	46	Not given	0.07 ppm wet wt	Inferior left rectus Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2534 Nail						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2535 Pancreas		Dithizone	45	Not given	0.46 ppm wet wt	Levels decreased with increasing age. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2536 Placenta		AAS	228	Not given	1.83 + or - 2.56 ug/g	Dry wt basis. Elevated by a factor of 2-3 in late autumn and early winter. Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, P.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, W. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
2537 Prostate		Dithizone	41	Not given	0.20 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2538 Saliva						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, H.S. 1977
2539 Skin		Dithizone	43	Not given	0.08 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2540 Spleen		APDC-MIBK AAS	10	Not given	0.22 ug/g wet wt	Autopsies-endogenous levels. LEAD; METALS; LIVER; BRAIN; HEART; SPLEEN; LUNGS; MEASUREMENT METHODS	Farris, F.F. Poklis, A. Griesmann, G.E. 1978
2541 Spleen		X-ray spectrom	6	Not given	25.1 ppm dry wt	2 samples per case. 2 analyses per sample. 1976 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2542 Spleen		Dithizone	43	Not given	0.33 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2543 Spleen		ES	a) 83 b) 36 c) 68	a) Not given b) Not given c) Not given	a) 7.85 ppm b) 12.6 ppm c) 8.81 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different (P<0.02), b) and c) different (P<0.05) Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1976
2544 Stomach		Dithizone	45	Not given	0.10 ppm wet wt	Levels decreased with increasing age. Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 973 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2545 Teeth		AAS	a) 9 b) 12 c) 15 d) 68 e) 17	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 0.9 ug/g b) 2.1 ug/g c) 5.0 ug/g d) 3.2 ug/g e) 25.7 ug/g	a) Specimens from 3300-2900 B.C. b) Specimens from 2030-1600 B.C. c) Specimens from 1650-1350 B.C. d) Specimens from 1-750 A.D. e) Contemporary specimens Medians. Samples from excavated skeletons in Sudan or from autopsies in Denmark. Ages 16 to >55 yr. METALS; LEAD; BONES; TEETH; AUTOPSIES; ADOLESCENTS; ADULTS; DENMARK; SUDAN; COMPARATIVE EVALUATIONS	Grandjean, P. Nielsen, O.V. Shapiro, I.M. 1979
2546 Teeth		ADOC-MIBK AAS	a) 40 b) 66 c) 22 d) 28	a) Not given b) Not given c) Not given d) Not given	a) 6.2 ppm b) 3.4 ppm c) 5.3 ppm d) 7.0 ppm	a) Nashville black children b) Nashville white children c) West Tennessee white children d) West Tennessee black children Additional data available. 106 teeth from Nashville donors from an elementary school in a middle-class area, and from day care centers in low-income areas. 87 teeth from West Tennessee donors from clinic for indigent children. 87 males, 86 females. TEETH; LEAD; METALS; TENNESSEE; CHILDREN	Chatman, T. Wilson, D.J. 1975
2547 Teeth		ASV	a) 279 b) 282	a) 0-<200 ug/g b) 0->400 ug/g	a) Not given b) Not given	a) Low exposure, mean school interior lead dust level of 613.75 ug/g b) High exposure, mean school interior lead dust level of 3287.4 ug/g. Dentine from asymptomatic first graders of districts 5 and 8, Philadelphia, PA METALS; LEAD; TEETH; CHILDREN; COMPARATIVE EVALUATIONS; PENNSYLVANIA; INDUSTRIAL AREAS	Needleman, H.L. Shapiro, I.M. 1974
2548 Teeth			a) 28 b) 28	a) Not given b) Not given	a) 71 ppm b) 53 ppm	a) NE Bristol b) SW Bristol Permanent premolar teeth collected from school dental clinics in Bristol, United Kingdom. METALS; LEAD; ZINC; CADMIUM; COPPER; TEETH; CHILDREN; UNITED KINGDOM	Stack, M.V. Burkitt, A.J. Nickless, G. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2549 Teeth	Ingestion		a) 22 b) 10 c) 10 d) 22 e) 8	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 212.9 ug/g b) 153.9 ug/g c) 171.0 ug/g d) 87.9 ug/g e) 19.0 ug/g	a) Exposed-old urban house b) Exposed-new urban house c) Control-old urban house d) Control-new urban house e) Control-new suburban or rural house Relationship between dental and blood Pb given. Exposed children living in or spending much time in old housing and with history of pica. All exposed children had positive coproporphyrins in urine. Control children living in housing in good state of repair, no history of pica and no coproporphyrins detected in urine. All cases aged 7 yr or less. METALS; LEAD; TEETH; BLOOD; CHILDREN; PICA; VIRGINIA	de la Burde, B. Shapiro, I.M. 1975
2550 Teeth		AAS	35	200-3550 ppm	1790 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Reda, A. Aasenden, R. Pathas, T. 1975
2551 Testis		Dithizone	83	Not given	0.15 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975
2552 Thyroid gland		Dithizone	80	Not given	0.71 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 46 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
Atw 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1150 C
(CONTINUED)

TISSUE	EXPOSURE GROUP	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2553 Urine		Titration	2	0.1-9.5 mg/l	Not given	From graph. Peak 4-6 days after starting treatment. Low, pretreatment and 60-day post-treatment. Occupationally-exposed patients in Mexico. METAL POISONING; METABOLITES; LEAD POISONING; DRUGS; IPPOLINIC ACIDS; PENICILLAMINE; OCCUPATIONAL HAZARDS; METALS; MEXICO; LEAD	Molina-Ballesteros, G. Zuniga-Charles, M.A. Sanchez-Anzaldo, F.J. Gonzales-Ramirez, J.D. 1978
2554 Urine		AAS	a) 588 b) 204	a) < or = 50 ug/l b) > 50 ug/l	a) Not given b) Not given	a) 158 of 588 with Cd levels of < than 1 ug/l b) 76 of 204 with Cd levels of > 1 ug/l Approx 1:10 ratio of Cd to Pb throughout range of values. Inpatients at 7 Marion County, Indiana hospitals, and the Indiana University Medical Center, Indianapolis, Ind. CADMIUM; LEAD; URINE; METALS; INDIANA	Lewis, S.C. Forney, R.B. 1976
2555 Urine			1	a) 35-59 ug/24 hr b) 98-1198 ug/24 hr	a) 47.3 ug/24 hr b) 469 ug/24 hr	a) Before Ca-EDTA administration b) After Ca-EDTA administration 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; FUME; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.D. Boxian, R.C. 1979
2556 Urine		KKS Electrochem	a) 11 b) 13	a) 22-129 ug/100 ml b) 0.72-4.20 umol/umol CaEDTA administered	a) Not given b) Not given	a) Before treatment with CaEDTA. Ages 18-58 mo b) 3-day treatment with 50 mg/kg/day CaEDTA IM. Ages 16-58 mo Both correlated with urinary ALA & erythrocyte protoporphyria but not with blood Pb. Children in prospective screening program at J.F. Kennedy Institute in 1972. LEAD; LEAD POISONING; METALS; METAL POISONING; COMPARATIVE EVALUATIONS; MARYLAND; MEASUREMENT METHODS	Chisolm, J.J., Jr. Barrett, B.B. Harrison, H.V. 1975
2557 Urine		AAS	a) 76 b) 22	a) 10-390 ug/l b) <10-50 ug/l	a) 88 ug/l b) 19 ug/l	a) Occupational exposure b) No known exposure Adults from Brisbane, Australia. METALS; CADMIUM; LEAD; KIDNEYS; URINE; OCCUPATIONAL HAZARDS; AUSTRALIA; COMPARATIVE EVALUATIONS	Miller, G.J. Wylie, M.J. McKeown, D. 1976

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Lead
7439-92-1
Pb
At# 207.2, BP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2558 Urine		AAS	7	a) 70-430 ug/l b) 90-483 ug/24 hr	a) 251.25 ug/l b) 292.25 ug/24 hr	All cases showed clinical signs of lead poisoning. Employees of ship-wrecking yard in Goteborg, Sweden, for 6 wk-20 yr, aged 26-66 yr. Weight loss, abdominal pain, constipation and/or diarrhea, fatigue, cramps, vomiting METALS; LEAD; BLOOD; URINE; ADULTS; OCCUPATIONAL HAZARDS; CASE HISTORIES; SWEDEN	Cramer, K. Goyer, R.A. Jagenburg, R. Wilson, H.H. 1974
2559 Urine	Ingestion		1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 110 ug/l b) 430 ug/l c) 102 ug/l d) 260 ug/l	a) Time of admission b) 20 months after admission c) 28 months after admission d) 36 months after admission Random urine lead concentrations. Black woman aged 46 yr from Jersey City, NJ Pulse rate of 106/min, grade II/VI midsystolic ejection murmur, grand mal seizure Anemia, encephalopathy, lead nephropathy, vitiligo and hyperpigmentation of gums, pale conjective, uterus enlarged with fibromyomata. LEAD; IRON; METALS; BLOOD; BLOOD SERUM; LEAD POISONING; ANEMIA; NEW JERSEY; NEUROLOGIC MANIFESTATIONS; NERVOUS SYSTEM DISEASES; URINE	Weleen, M.P. Mallik, D.K. Batuman, V. Bogden, J.D. 1978
2560 Urine	Ingestion		1	Not applicable	4-72 ug/24 hr	Patient aged 28 living in Britain had purchased aphrodisiacs from Bangladesh. Constipation, precordial pain, generalised pain, colicky loin pain, nausea, and vomiting Intestinal ileus sideroblastic anemia LEAD; METALS; LEAD POISONING; UNITED KINGDOM; BLOOD; URINE; BLOOD SERUM	Brearley, R.L. Forsythe, A.M. 1978
2561 Urine		Dithizone	9	Not given	0.06 ppm wet wt	Samples from autopsies from the Cincinnati area (1969-1971) of 86 white males, aged 20-84 yr. 19 traumatic deaths, 6 deaths due to drugs or carbon monoxide, 21 deaths due to medical causes. LEAD; METALS; BONES; ADIPOSE TISSUE; URINE; MUSCLES; INTESTINES; HEART; SKIN; BLADDER; STOMACH; BRAIN; TESTES; THYROID GLANDS; PROSTATE; BLOOD; ADRENAL GLANDS; LUNGS; SPLEEN; PANCREAS; KIDNEYS; LIVER; AORTA; AUTOPSIES; OHIO; BIOACCUMULATION	Gross, S.B. Pfitzer, E.A. Yeager, D.W. Kehoe, R.A. 1975

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2562 Urine		Dithizone	a) 23 b) 42 c) 35 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 385 + or - 71 ug/l b) 251 + or - 106 ug/l c) 100.6 + or - 41 ug/l d) 92 + or - 34 ug/l	a) Pb-poisoned workers b) Workers with moderately increased Pb absorption c) Workers with slightly increased Pb absorption d) Workers with physiologic Pb absorption, polluted environment Groups established on the basis of workers' complaints, clinical examination and toxicological tests. Workers employed 1-23 yr in a Hungarian storage battery plant. METALS; LEAD; BLOOD; URINE; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; SEX; HUNGARY	Lancranjan, I. Popescu, H.I. Gavanescu, O. Klepsch, I. Serbanescu, M. 1975
2563 Urine						Review REVIEW; METALS; LEAD; HEALTH HAZARDS; CHILDREN; ADULTS; LEAD POISONING; METABOLITES; BLOOD PLASMA; BLOOD SERUM; BONES; URINE; AUTOMOTIVE; ERYTHROCYTES; BLOOD; HAIR; NAILS; SALIVA	Posner, M.S. 1977
2564 Urine		AAS	25	48-334 ug/l	103.36 ug/l	Adults (24-62 yr) working in refining, cutting or welding of Pb, New Jersey. METALS; LEAD; BLOOD; URINE; OCCUPATIONAL HAZARDS; NEW JERSEY	Vitale, L.F. Joselow, M.M. Wedeen, R.P. Pawlow, M. 1975
2565 Urine		AAS	87	Not given	3.82 + or - 2.77 ug/100 ml	Occupationally exposed to Pb. Values corrected to 1.024 specific gravity urine. Workers exposed to Pb 2-15 yr in a polyvinyl chloride factory. LEAD; METALS; JAPAN; OCCUPATIONAL HAZARDS; BLOOD; URINE; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS; PHETHRES; ADULTS	Tonokuni, K. 1978
2566 Urine			22	a) Not given b) Not given	a) 5.5 + or - 4.0 ug/100 ml b) 4.9 + or - 2.1 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Storage battery workers after 24 wk treatment with zinc and vitamin C Workers, aged 28-60 yr, in battery plant from 4-34 yr. 100 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBINS; URINE; DIETS; VITAMIN C	Papaioannou, P. Sohler, A. Pfeiffer, C.C. 1978

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Lead
7439-92-1
Pb
AtW 207.2, MP 327.4 C, BP 1740 C, VP 1.77 mm Hg at 1000 C, 1 mm Hg at 970 C, 10 mm Hg at 1160 C
(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2567 Urine			9	a) 83-474 ug/day b) 530-5200 ug/day	a) 159.1 ug/day b) 2049.4 ug/day	a) 24-hr urines before chelation b) After 2 x 1g doses of CaEDTA IM 8-12 hr apart, 24-hr urines Detailed clearance data presented for 1 with Pb nephropathy. Ex workers chosen for study after screening tests suggested excessive body burdens of Pb. Two hospitalized with lead colic. Lead exposure: 3-6 yr. Ages 28-50 yr. Two subjects: lead colic 7 subjects: preclinical Pb nephropathy, proximal tubule abnormalities. LEAD; METALS; METAL POISONING; LEAD POISONING; BLOOD; URINE; OCCUPATIONAL HAZARDS; MINERAL METABOLISM	Wedeen, R.P. Maesaka, J.K. Weiner, H. Lipat, G.A. Lyons, M.M. Vitale, L.F. Joselow, M.M. 1975
2568 Urine		AAS	a) 38 b) 48	a) Not given b) Not given	a) 0.34 umoles/l b) 0.27 umoles/l	a) Cardiovascular patients b) Normotensive patients Intraindividual variation. Patients with moderate to severe cardiac conditions and/or hypertension. Controls with no known cardiovascular symptoms. All over 30 yr old. METALS; CADMIUM; LEAD; CARDIOVASCULAR DISEASES; UNITED KINGDOM; HYPERTENSION; AGE; ADULTS; SMOKING; COMPARATIVE EVALUATIONS; BLOOD; URINE	Khera, A.K. Wibberley, D.G. Edwards, K.W. Waldron, H.A. 1980
2569 Urine		AAS	15	6-31 ng/ml	15.32 ng/ml	No apparent differences in relation to time, sex, or age. Unexposed volunteers ages, 20-54 yr. METALS; CADMIUM; LEAD; URINE; MEASUREMENT METHODS; AGE; SEX; COMPARATIVE EVALUATIONS; NEW YORK	Legotte, P.A. Rosa, W.C. Sutton, D.C. 1980
2570 Urine		APDC-MIBK AAS	9	0.07-1.82 umol/l	0.42 umol/l	Lead workers, 21-63 yr old, being diagnosed and treated for lead poisoning. METALS; LEAD; BLOOD; URINE; COMPARATIVE EVALUATIONS; LEAD POISONING; JAPAN; OCCUPATIONAL HAZARDS	Araki, S. 1980

Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 850 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2571 Blood, plasma	Ingestion	AAS	8	a) Not given b) Not given	a) 0.675 + or - 0.033 mmol/l b) 0.674 + or - 0.042 mmol/l	a) 2.1 + or - 0.36 hr after 800 mg Li ion in Lithicarb (standard tablets) b) 3.5 + or - 0.47 hr after 800 mg Li ion in Priadel (slow release preparation) Peak means Curves over 8 hr suggest equivalent bioavailability of the drugs. Healthy volunteers, 20-23 yr old, 58.5-92.7 kg. DRUGS; DRUG THERAPY; LITHIUM; METABOLISM; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; ANTIDEPRESSIVE AGENTS; AUSTRALIA	Johnson, G. Hunt, G. Jackson, D. Richards, T. Kwan, F. 1979
2572 Blood, serum	Ingestion	AAS	5	a) 0.38-0.45 mEq/l b) 0.40-0.45 mEq/l c) 0.45-0.52 mEq/l	a) Not given b) Not given c) Not given	a) During 9-day treatment with 300 mg Li carbonate 3 times per day b) During 2-wk treatment with 300 mg Li 3 times per day plus furosemide (40 mg/day) c) During 2-wk treatment with 300 mg Li 3 times per day plus hydrochlorothiazide (50 mg/day) Range of means. 6 healthy volunteers (5 men and 1 woman) ages 24-40 yr Slight tremors, concentration difficulties and psychotropic effects after lithium alone in some. Polyuria, thirst, tiredness, nausea, and concentration, speech and vision problems after lithium and furosemide. Thirst and concentration problems in a few subjects after lithium and hydrochlorothiazide. DRUGS; PSYCHOTROPIC DRUGS; BLOOD SERUM; LITHIUM; METALS; WISCONSIN	Jefferson, J.W. Kalin, N.H. 1979
2573 Blood, serum			11	0.2-1.75 meq/l	Not given	Range, days 2-7, patients on varying doses Li2CO3 for 10 days. Mean drop in serum thyroxine-I after 10 days was 3.83 ug/dl. Patients with thyrotoxicosis. Tremor, nausea & vomiting, difficulty in accommodation. LITHIUM; DENMARK; HORMONES; DISEASES; COMPARATIVE EVALUATIONS; DRUGS	Kristensen, O. Andersen, M.H. Pallisgaard, G. 1976
2574 Blood, serum	Ingestion		1	0.7-1.0 mmoles/l	Not given	300 mg Li2CO3 4X/day and 5 mg/day haloperidol. 24-yr-old female suffering from mania, July 1978. After 5 mo on Li2CO3: weakness and fatigue followed by gum bleeding and epistaxis. Development of acute monocytic leukemia. At 5 months: white-cell count 282,000, with monoblast morphology. LITHIUM; NERVOUS SYSTEM DISEASES; BLOOD SERUM; LEUKEMIA; METALS; HEALTH HAZARDS; NEOPLASMS; CASE HISTORIES	Hammond, W.P., IV Appelbaum, F. 1980

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Lithium
7439-93-2
Li
Atw 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 890 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2575 Hair		Photometry	a) 179 b) 108 c) 102 d) 109	a) Not given b) Not given c) Not given d) Not given	a) 0.04 ug/g b) 0.05 ug/g c) 0.04 ug/g d) 0.05 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults Correlation between Li and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Nieboer, E.A. Baugarner, J.E. Pinkerton, C. 1975
2576 Kidney		ES		a) Not given b) Not given c) Not given	a) 76.0 ppm (93%) b) 83.0 ppm (32%) c) 89.8 ppm (16%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2577 Liver		ES		a) Not given b) Not given c) Not given	a) 79.2 ppm (82%) b) 81.6 ppm (27%) c) 57.5 ppm (16%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Lithium
7439-93-2
Li
AtW 6.941, MP 180.54 C, BP 1336 C, VP 1 mm Hg at 723 C, 10 mm Hg at 990 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2578 Spleen		ES		a) Not given b) Not given c) Not given	a) 75.6 ppm (63%) b) 85.9 ppm (27%) c) 70.8 ppm (10*)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2579 Urine	Ingestion	AAS	8	a) Not given b) Not given	a) 54.9% b) 51.7%	a) Excreted during 24 hr after 900 mg Li ion in Lithicarb (standard tablets) b) Excreted during 24 hr after 900 mg Li ion in Priadel (slow release preparation) During first 4 hr 19.7% excreted after Lithicarb, 13.7% after Priadel ($p < 0.001$). Healthy volunteers, 20-23 yr old, 58.5-92.7 kg. DRUGS; DRUG THERAPY; LITHIUM; METABOLISM; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS; ANTIDEPRESSIVE AGENTS; AUSTRALIA	Johnson, G. Hunt, G. Jackson, D. Richards, T. Kwan, E. 1979

p-Hydroxyphenylacetic acid (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2580 Urine	Ingestion	GC	4	a) 9.0-25.0 mg/24 hr b) 40.5-77.0 mg/24 hr	a) 18.4 mg/24 hr b) 59.4 mg/24 hr	a) Standard drug formulation b) Delayed absorption tablets Dosage 2.5-3.5 g/day levodopa. 2 male and 2 female parkinsonian patients aged 61-68 yr. Gastrointestinal side effects with delayed release form. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Sandler, M. Ruthven, C.R.J. Goodwin, B.L. Hunter, K.R. Stern, G.M. 1974

o-Toluic acid, alpha,5-diacetamido-2,4,6-triiodo- (8 CI)
Benzoic acid, 3-(acetylamino)-5-((acetylamino)methyl)-2,4,6-triiodo- (9 CI)
440-58-4
C12-H11-I3-N2-O4
MW 627.93, MP 255-257 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2581 Blood, plasma	Injection		a) 3 b) 3 c) 4 d) 2 e) 4 f) 2 g) 5	a) 255-13.7 mg% b) 185-41 mg% c) 255-47 mg% d) 215-65 mg% e) 460-26 mg% f) 600-320 mg% g) 440-150 mg%	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) 2.5 and 240 min after 24.75 g in 5 min to healthy males b) 2.5 and 240 min after 9.9 g in 2 min to renally impaired c) 2.5 and 480 min after 19.8 g in 4 min to renally impaired d) 2.5 and 480 min after 29.7 g in 6 min to renally impaired e) 2.5 and 240 min after 61.8 g in 23 min to healthy males f) 2.5 and 240 min after 83.2 g in 16 min to renally impaired g) 2.5 and 240 min after 56.2 g in 19 min, to renally impaired COMPARATIVE EVALUATIONS; BLOOD PLASMA; URINE; FECES; DRUGS	DiFazio, L.T. Singhvi, S.M. Heald, A.F. McKinstry, D.N. Brosman, S.A. Gillenwater, J.Y. Willard, D.A. 1978
2582 Urine	Injection		7	a) Not given b) Not given	a) 98% of dose b) 94% of dose	a) First 4 hr, healthy males b) 72 hr, healthy males Data incomplete for patients with renal impairment but most of dose excreted in urine. Normal subjects excreted most of dose as unchanged icdamide. COMPARATIVE EVALUATIONS; BLOOD PLASMA; URINE; FECES; DRUGS	DiFazio, L.T. Singhvi, S.M. Heald, A.F. McKinstry, D.N. Brosman, S.A. Gillenwater, J.Y. Willard, D.A. 1978

m-Tyrosine, L- (8 CI) (VAN)
L-Phenylalanine, 3-hydroxy- (9 CI)
587-33-7
C9-H11-N-03
MW 181.19, MP 267-270 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2583 Blood, plasma	Ingestion	CC	2	3-9 umoles/l	Not given	0.3-1.0 hr after 5 mg/kg. Peak, 0.3-0.5 hr Healthy adults maintained on milk and water since previous day. AMINO ACIDS; METABOLISM; METABOLITES; BLOOD PLASMA; URINE; UNITED KINGDOM	Fell, V. Greenway, A.M. Hoskins, J.A. 1979
2584 Urine	Ingestion	GC/MS	2	26-105% of dose	65.5% of dose	Excreted as m-hydroxyphenylacetic acid in 8-hr urines. 5 mg/kg dose. m-Hydroxymandelic acid and 3,4-dihydroxyphenylacetic acid also detected 0.5-3 hr. Healthy adults maintained on milk and water since previous day. AMINO ACIDS; METABOLISM; METABOLITES; BLOOD PLASMA; URINE; UNITED KINGDOM	Fell, V. Greenway, A.M. Hoskins, J.A. 1979

Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2585 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.53 mg/100 ml b) 1.65 mg/100 ml c) 1.69 mg/100 ml d) 1.77 mg/100 ml e) 1.76 mg/100 ml f) 1.73 mg/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group f) Cord blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity. Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Rogden, J.D. Thind, I.S. Kemp, F.W. Caterini, H. 1978
2586 Blood						Review METALS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; METALLOPROTEINS; RHEUMATOID ARTHRITIS; REVIEW	Sorenson, J.R.J. 1978
2587 Blood, plasma	Injection	Colorimetry	a) 1 b) 10	a) 1.56-1.91 meq/l b) 1.2-3.6 meq/l	a) Not given b) Not given	a) Range of incremental-Mg 0.75-3.75 hr after 16.4 meq IV at start of 1.12 ml/min infusion of 2.5% MgSO4 heptahydrate. Nonpregnant women with leiomyomas b) 0.25- and 5-hr means after a dose of 24.6 meq IV with 82.4 meq IM to eclamptic women. Peak mean, 4.5 meq/l, at 1-2 hr Data on sucrose and Mg species. METALS; MAGNESIUM; PREGNANCY; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Chesley, L.C. 1979
2588 Blood, serum						Review MAGNESIUM; LEAD; ZINC; METALS; TRACE ELEMENTS; DRINKING WATER; BLOOD; BLOOD SERUM; HEART; BONES; UNITED KINGDOM; CANADA; UNITED STATES; FINLAND	Sharrett, A.R. 1977
2589 Blood, serum		AAS	187	a) Not given b) Not given	a) 2.4 mg/100 ml b) 2.5 mg/100 ml	a) Men b) Women Criteria for low levels < 1.6 mg/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978

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Magnesium
7439-95-4
Mg
Atw 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2590 Blood, serum	Ingestion	AAS	a) 16 b) 16 c) 9	a) 1.98-1.85 mg/dl b) 1.72-1.81 mg/dl c) 2.05-2.13 mg/dl	a) Not applicable b) Not applicable c) Not applicable	a) Control, 2 and 6 hr after 50 mg Zn. Fasting value, 1.92 mg/dl b) Cirrhotic,0 and 4 hr after 50 mg Zn. Final value, 1.77 mg/dl at 6 hr c) Postsurgical group, 0 and 4 hr after 50 mg Zn. Final value, 2.07 mg/dl at 6 hr All groups fasted before Zn. Controls, patients with alcoholic cirrhosis, postsurgical patients with delayed healing. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, H.B. 1979
2591 Blood, serum	Ingestion	AAS	8	1.90-1.97 ug/100 ml	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 419.78 (413.98-424.93) mg Mg/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hexicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS; COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.M. Kies, C. Fox, H.M. 1979
2592 Blood, serum	Ingestion	AAS	a) 80 b) 72	a) 1.5-2.5 mg/100 ml b) 1.5-2.5 mg/100 ml	a) 1.96 + or - 0.19 mg/100 ml b) 2.00 + or - 0.19 mg/100 ml	a) Adolescent girls, 1976 b) Adolescent girls, 1977 Intakes, determined by dietary recall, below RDA but sufficient to maintain balance. All levels in normal range. Adolescent girls, mean age of 13.3 yr in a) and 14.5 yr in b). ADOLESCENTS; BLOOD; METALS; TRACE ELEMENTS	Greger, J.L. Gruner, S.M. Ethyre, G.M. Abernathy, R.P. Sickles, V. 1979
2593 Blood, serum		AAS	28	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 15.6 ug/ml b) 15.1 ug/ml c) 15.5 ug/ml d) 14.1 ug/ml e) 15.0 ug/ml f) 16.9 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-15 mo lactation e) 16-21 mo lactation f) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979

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Magnesium
7439-95-4
Mg
atw 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 780 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2594 Hair		AAS	5	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 37 ppm b) 28 ppm c) 22 ppm d) 74 ppm e) 61 ppm	a) 1-6 mo lactation b) 7-9 mo lactation c) 10-15 mo lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.P. 1979
2595 Heart						Review MAGNESIUM; LEAD; ZINC; METALS; TRACE ELEMENTS; DRINKING WATER; BLOOD; BLOOD SERUM; HEART; BONES; UNITED KINGDOM; CANADA; UNITED STATES; FINLAND	Sharrett, A.R. 1977
2596 Kidney		ES	a) 134 b) 74 c) 86	a) Not given b) Not given c) Not given	a) 607 ppm b) 597 ppm c) 559 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2597 Liver		ES	a) 91 b) 42 c) 76	a) Not given b) Not given c) Not given	a) 899 ppm b) 561 ppm c) 559 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2598 Lung		ES	30	11.5-186.0 mg/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, H.J. Holtz, J.L. Gorski, C.R. 1967

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Magnesium
7439-95-4
Mg
AtW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 780 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2599 Lung		AAS	20	Not given	543.0 mg/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2600 Lung		AAS	a) 129 b) 15	a) 0.43-0.62 mg/g dry wt b) Not given	a) 0.52 mg/g dry wt b) 0.38 mg/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
2601 Lung		AAS	134	0.43-0.62 mg/g dry wt	0.53 mg/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Liatiaca, L.P. Morris, H.B. Holtz, J.L. Bauer, P. Wolowicz, F.R. 1971
2602 Lymph node		AAS	14	Not given	1303.0 mg/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2603 Milk		AAS	a) 28 b) 38 c) 27 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 31 + or - 1.7 ug/ml b) 37 + or - 2.7 ug/ml c) 26 + or - 3.3 ug/ml d) 29 + or - 8.7 ug/ml e) 30 + or - 4.6 ug/ml f) 26 + or - 5.1 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 mo lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr age, 22 primiparae and 16 multiparae. BLOOD SERUM; MILK; METALS; LACTATION; HAIR; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.P. 1979

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agnesium
439-95-4
g
tm 24.305, mp 651 C, bp 1090 C, vp 1 mm Hg at 621 C, 10 mm Hg at 780 C

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TISSUE	DISPOSAL ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2604 Milk		AAS	a) 76 b) 77 c) 23 d) 78 e) 29	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 40.38 ug/ml b) 31.65 ug/ml c) 29.13 ug/ml d) 32.0 ug/ml e) 29.0 ug/ml	c) Colostrum, high and low income groups b) After lactation 1-3 months, high and low income groups c) After lactation > or = 13 months, high and low income groups d) After lactation 1-3 months, low income group e) After lactation 1-3 months, high income group; Additional data available. No significant difference between income groups. Women from urban and rural India. METALS; TRACE ELEMENTS; COPPER; MAGNESIUM; ZINC; MILK; COMPARATIVE EVALUATIONS; URBAN AREAS; RURAL AREAS; INDIA	Rajalakshmi, K. Srikantia, S.G. 1980
2605 Nail		NA	a) 50 b) 50 c) 28 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 108.1 ug/g dry wt b) 102.7 ug/g dry wt c) 118.2 ug/g dry wt d) 120.6 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 28 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Foirtyohann, S.R. Pierce, J.O. Schaeschele, F.G. 1976
2606 Spleen		NS	a) 90 b) 38 c) 76	a) Not given b) Not given c) Not given	a) 507 ppm b) 515 ppm c) 521 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; ECTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; PCBON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2607 Teeth		AAS	35	880-5720 ppm	1650 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Soda, A. Aasenden, R. Bakhos, Y. 1975

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Magnesium
7439-95-4
Mg
AAW 24.305, MP 651 C, BP 1100 C, VP 1 mm Hg at 621 C, 10 mm Hg at 740 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2608 Urine		AAS	a) 4 b) 3	a) 95-167 mg/day b) 86-124 mg/day	a) 128 mg/day b) 105 mg/day	a) Controls, 32-36 wk pregnant, identical diets b) 32-36 wk pregnant, 1 g/day extra calcium 7 primapara, aged 16-19 yr CALCIUM; MAGNESIUM; PHOSPHORUS; METALS; URINE; PREGNANCY; DIETS; AUSTRALIA; COMPARATIVE EVALUATIONS	Duggin, G.G. Lyneham, B.C. Dale, M.E. Evans, R.A. Tiller, D.J. 1978a
2609 Urine	Ingestion	AAS	a) 16 b) 16	a) 3.8-9.1 mg/hr b) 3.5-4.8 mg/hr	a) Not applicable b) Not applicable	a) Control, 0 and 24 hr after 50 mg Zn b) Cirrhotic, 0 and 24 hr after 50 mg Zn All fasted before Zn. Controls, patients with alcoholic cirrhosis. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, R.E. 1979
2610 Urine	Injection	Colorimetry	a) 1 b) 10	a) 23.3-47.5% b) 9-52%	a) Not applicable b) Not applicable	a) Cumulative excretion 0.75-3.75 hr after 16.4 meq IV at start of 1.12 ml/min infusion of 2.5% $MgSO_4$ heptahydrate. Nonpregnant woman with leiomyomas b) 1-hr to 5-hr mean cumulative excretions after 24.6 meq IV and 82.0 meq IM. Eclamptic women. METALS; MAGNESIUM; PREGNANCY; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Chesley, L.C. 1979
2611 Urine	Ingestion	AAS	9	155.0-172.2 mg/day	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 419.78 (413.98-424.93) mg Mg/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hemicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS; COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.M. Kies, C. Fox, H.M. 1979
2612 Urine	Ingestion	AAS	12	a) Not given b) Not given	a) 114 + or - 11 mg/day b) 126 + or - 8 mg/day	a) Low fiber diet plus 356 mg Mg/day for 26 days b) High fiber diet plus 322 mg Mg/day for 26 days Mean + or - S.E. Samples collected during last 7 days. Balance data available. 37-58 yr old men METALS; TRACE ELEMENTS; MINERALS; URINE; ADULTS; FECES; CALCIUM; MAGNESIUM; IRON; SILICON; COMPARATIVE EVALUATIONS; DIETS; FIBERS; METABOLISM; MARYLAND	Kelsay, J.L. Behall, K.M. Prather, E.S. 1979

Mandelic acid (9 CI)
Benzeneacetic acid, alpha-hydroxy- (9 CI)
90-64-2
CP-MP-03
MW 152.14, MP 119 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2613 Urine	Inhalation Ingestion Dermal	Fluorometry	8	a) 67-76 ug/ml b) 55-97 ug/ml c) 0-14 ug/ml d) 2-23 ug/ml	a) 62.5 ug/ml b) 73.5 ug/ml c) 4.2 + or - 3.3 ug/ml d) 12.5 + or - 5 ug/ml	a) Day 1 of styrene exposure, 8 workers b) Second consecutive day of styrene exposure, 8 workers c) Day 1, 8 control workers d) Day 2, 8 control workers 8 workers in polyester plastics plant, 8 exposed to styrene. MEASUREMENT METHODS; URINE; CANADA; ACIDITY; OCCUPATIONAL HAZARDS; STYRENES; METABOLITES; AIR POLLUTION; HEALTH HAZARDS	Chakraborti, S.K. 1979

Manganese
7439-96-5
Mn
Atw 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2614 Blood						Review METALS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; METALLOPROTEINS; RHEUMATOID ARTHRITIS; REVIEW	Sorenson, J.R.J. 1976
2615 Blood		AAS	a) 23 b) 12 c) 17 d) 58 e) 17 f) 17 g) 38 h) 38 i) 7 j) 9 k) 17 l) 7 m) 5 n) 18 o) 9	a) 10.0-23.8 ppb b) 10.6-29.6 ppb c) 6.2-10.4 ppb d) 3.6-11.9 ppb e) 2.7-18.1 ppb f) 3.6-10.5 ppb g) 2.7-13.3 ppb h) 8.0-18.1 ppb i) 6.0-10.8 ppb j) 5.0-10.0 ppb k) 8.8-9.3 ppb l) 5.5-9.6 ppb m) 2.6-10.8 ppb n) 8.2-20.3 ppb o) 7.5-15.0 ppb	a) 16.9 ppb b) 20.1 ppb c) 7.31 ppb d) 7.2 ppb e) 7.5 ppb f) 6.9 ppb g) 6.8 ppb h) 7.7 ppb i) 8.3 ppb j) 8.0 ppb k) 7.2 ppb l) 7.2 ppb m) 7.7 ppb n) 11.8 ppb o) 12.5 ppb	a) 0-3 yr old hospital patients b) 4-6 yr old hospital patients c) Residents < 1 km from smelter, age 2-3 yr d) Residents 1-2 km from smelter, age 2-3 yr e) Residents >2 km from smelter, age 2-3 yr f) Age 2-3 yr, blood Pb < 100 ppb g) Age 2-3 yr, blood Pb 101-150 ppb h) Age 2-3 yr, blood Pb 151-200 ppb i) Age 2-3 yr, blood Pb 201-250 ppb j) Age 2-3 yr, blood Pb > 250 ppb k) Cable factory workers, blood Pb < 200 ppb l) Cable factory workers, blood Pb > 200 ppb m) Workers, smelter, blood Pb 101-200 ppb n) Workers, smelter, blood Pb 401-500 ppb o) Workers, smelter, blood Pb 701-800 ppb Dutch subjects aged 2 mo or older. METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SERUM; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SMELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Tielsain, H.L. del Castilho, P. Herber, R.F.M. Wibowo, A.A.E. 1978
2616 Blood, serum		AAS	9	5-16 ng/ml	9 ng/ml	Healthy donors, aged 21-41 yr Blood samples provided by Umberto I Regional Hospital, Ancona, Italy. METALS; MANGANESE; COBALT; COPPER; BIOCD; BLOOD SERUM; ITALY	Buzzarelli, F.A.A. Bocchetti, R. 1975
2617 Blood, whole		AAS	33	3-21 ng/ml	11 ng/ml	Healthy donors, aged 21-53 yr. Blood samples provided by Umberto I Regional Hospital, Ancona, Italy. METALS; MANGANESE; COBALT; COPPER; BIOCD; BLOOD SERUM; ITALY	Buzzarelli, F.A.A. Bocchetti, R. 1975
2618 Hair		NA	11	1.230-8.215 ppm	3.935 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Sienes, E. 1977

(SEE PAIR)

Manganese
7439-96-5
Mn
Atm 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2619 Hair		AAS	a) 179 b) 108 c) 102 d) 109	a) Not given b) Not given c) Not given d) Not given	a) 0.83 ug/g b) 0.88 ug/g c) 0.64 ug/g d) 1.34 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults Correlation between Mn and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.F. Pinkerton, C. 1975
2620 Kidney		ES	a) 133 b) 73 c) 84	a) Not given b) Not given c) Not given	a) 6.05 ppm b) 6.35 ppm c) 2.96 ppm	a) No renal disease b) Acute renal failure c) Chronic renal failure c) Different from a) and b), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2621 Liver		ES	a) 91 b) 10.7 c) 9.87	a) Not given b) Not given c) Not given	a) 0.11 ppm b) 10.7 ppm c) 9.87 ppm	a) No renal disease b) Acute renal failure c) Chronic renal failure Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2622 Liver						Fetal tissue. Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980

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Manganese
7439-96-5
Mn
Atm 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2623 Lung		ES	30	Not detectable-15.5 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.B. Knott, M.J. Holtz, J.L. Gorski, C.M. 1967
2624 Lung			20	Not given	6.9 ug/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Swallwood, A.W. Carlberg, J.R. 1971
2625 Lung		AAS	a) 129 b) 15	a) 2.4-9.7 ug/g dry wt b) Not given	a) 6.1 ug/g dry wt b) 7.1 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
2626 Lung		ES	138	2.4-9.7 ug/g dry wt	5.9 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Lintiaca, L.P. Morris, H.R. Holtz, J.L. Mauer, P. Wolowicz, P.B. 1971
2627 Lymph node		ES	14	Not given	4.6 ug/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Swallwood, A.W. Carlberg, J.R. 1971

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Manganese
7439-96-5
Mn
AtW 54.9380, MP 1244 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2628 Milk		AAS	a) 28 b) 39 c) 23 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.98 + or - 0.21 ug/100 ml b) 2.38 + or - 0.33 ug/100 ml c) 2.53 + or - 0.39 ug/100 ml d) 1.75 + or - 0.27 ug/100 ml e) 1.81 + or - 0.51 ug/100 ml f) 1.99 + or - 0.86 ug/100 ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 mo lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr age, 22 primiparae and 16 multiparae. BLOOD SERUM; MILK; METALS; LACTATION; HAIR; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
2629 Milk						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
2630 Nail		NA	a) 50 b) 50 c) 34 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 8.3 ug/g dry wt b) 5.2 ug/g dry wt c) 5.6 ug/g dry wt d) 7.0 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schaeschula, R.G. 1976
2631 Spleen		ES	a) 71 b) 34 c) 63	a) Not given b) Not given c) Not given	a) 1.72 ppm b) 2.06 ppm c) 2.06 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2632 Urine		NA	a) 1 b) 1	a) 0.10-0.64 ug/24 hr b) 0.093-0.67 ug/24 hr	a) 0.22 ug/24 hr b) 0.38 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

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Manganese
7439-96-5
Mn
Atw 54.9380, MP 1246 C, BP 2095 C, VP 1 mm Hg at 1292 C, 10 mm Hg at 1510 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2633 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 15 + or - 1.9 ug/day b) 13 + or - 0.5 ug/day c) 9 + or - 1.0 ug/day	a) 8 studies, 21 days each - 2133 ug Mn plus 200 mg Ca/day b) 4 studies, 24 days each - 2229 ug Mn plus 800 mg Ca/day c) 1 study, 10 days - 2133 ug Mn plus 1500 mg Ca/day Mean + or - S.E. 1 study equivalent of 1 case Balance and other data available. 7 patients with psychoneurosis, 1 with hypercalciurea, and 1 with Paget's disease, 41-63 yr old. All in good physical condition. METALS; TRACE ELEMENTS; MINERALS; CADMIUM; COPPER; MANGANESE; ZINC; COMPARATIVE EVALUATIONS; FECES; URINE; ADULTS; DIETS; METABOLISM; ILLINOIS	Spencer, H. Rasmussen, C.E. Holtzman, R.B. Kramer, L. 1979

Melamine, pentamethyl- (8 CI)
1,3,5-Triazine-2,4,6-triamine, N,N,N',N',N''-pentamethyl- (9 CI)
16268-62-5
C8-H16-N6
MW 196.30

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2634 Blood, plasma	Injection	GC	5	a) Not given b) Not given c) Not given d) Not given	a) 3.00 ug/ml b) 0.33 ug/ml c) 0.71 ug/ml d) 0.08 ug/ml	a) Peak, immediately after 2 hr IV, 265 mg/sq m b) 6 hr after IV, 265 mg/sq m c) Peak, immediately after 2 hr IV infusion at 80 mg/sq m d) 2.5 hr after IV, 80 mg/sq m Pharmacokinetic data available Metabolites isolated. Patients with unresectable cancer. DRUGS; DRUG THERAPY; CHEMOTHERAPY; BLOOD PLASMA; METABOLISM; METABOLITES; COMPARATIVE EVALUATIONS; MINNESOTA	Ames, M.M. Powis, G. Kovach, J.S. Hagan, R.T. 1979

Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2635 Adipose		AAS	1	Not given	240 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 18. Cause of death uncertain. Mercurial nephrotoxicity. MERCURY; IOWA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Bases, L.K. Jensen, R.L. Roberts, R.J. 1976
2636 Blood			14	a) 1000-3900 ng/ml b) 100-800 ng/ml	a) Not given b) Not given	a) Levels measured at height of exposure b) 7 mo after exposure levels for controls not given. Patients poisoned with methylmercury. Purpose of paper was to measure conduction velocities. Clinical electrophysiological testing does not support resemblance of methylmercury poisoning to peripheral polyneuropathy. Possible lower brain stem damage. METALS; MERCURY; BLOOD; METAL POISONING; IRAQ	Von Burg, R. Rustam, H. 1974
2637 Blood						Review. Emphasis on diagnostic signs and symptoms which furnish early warning of toxicity. REVIEW; MERCURY; METALS; METAL POISONING; METABOLISM; HEALTH HAZARDS; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; POPULATION EXPOSURE; FOOD CONTAMINATION; OCCUPATIONAL HAZARDS; BLOOD; URINE; HAIR	Gerstner, H.B. Huff, J.E. 1977
2638 Blood		AAS	a) 929 b) 872	a) Not given b) Not given	a) 0.048 + or - 0.044 ug/g b) 0.054 + or - 0.049 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2639 Blood, cells	Ingestion	NA	a) 23 b) 16	a) 12.8-1100 ng/g b) 3-15 ng/g	a) Not given b) Not given	a) Ate food containing methylmercury b) Controls Total Hg measured as index of exposure to and retention of MeHg. Adult residents of Sweden with no known occupational exposure. Correlation between blood Hg levels and frequency of cells with chromatid-type aberrations, "unstable" chromosome-type aberrations, and aneuploidy. METALS; MERCURY; LEAD; SWEDEN; BLOOD; FOOD CONTAMINATION	Skerfving, S. Hansson, K. Mangs, C. Lindsten, J. Ryman, N. 1974
2640 Blood, cells	Ingestion		6	a) 0.2-2 ng/ml b) 0.8-1.5 ng/ml	a) 1.05 ng/ml b) 1.25 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-14 hr. Dose approximately 20 ug/kg. Healthy adults, 19-44 yr old, weighing 68-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980
2641 Blood, plasma	Ingestion		6	a) 0.2-0.5 ng/ml b) 0.3-0.5 ng/ml	a) 0.38 ng/ml b) 0.43 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-14 hr. Dose approximately 20 ug/kg. Healthy adults, 19-44 yr old, weighing 68-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980
2642 Blood, serum		AAS	1	456-15 ug/dl	Not applicable	Change in levels during continuous peritoneal lavage, days 1-7 (from admission) with 12 mg dimercaprol IM every 6 hr. 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 14. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; IOWA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Eames, L.K. Jensen, R.L. Roberts, R.J. 1976

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2643 Blood, serum	Injection	AAS	1	a) Not applicable b) Not applicable c) 9.0-12.5 ug/dl	a) 19 ug/dl b) 39 ug/dl c) Not given	a) 2 days after injections b) 9 days after injections c) After excision of abscesses 0.1 ml, subcutaneously at each of 6 different sites. 13 yr old Pain on full flexion and extension of hand. Nonfluctuant tender masses on arms, abdomen and leg with metallic densities in the area of the masses and in the colon. METALS; MERCURY; BLOOD PLASMA; URINE; CASE HISTORIES; PENNSYLVANIA; METAL POISONING; ADOLESCENTS	Krohn, I.T. Solof, A. Mobine, J. Wagner, D.K. 1980
2644 Blood, whole	Ingestion		6	a) 0.3-0.9 ng/ml b) 0.6-0.9 ng/ml	a) 0.53 ng/ml b) 0.8 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-14 hr. Dose approximately 20 ug/ml. Healthy adults, 19-44 yr old, weighing 68-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980
2645 Brain			a) 28 b) 14 c) 42 d) 3 e) 4 f) 7 g) 2	a) 0-0.25 ppm b) 0-0.94 ppm c) 0-0.94 ppm d) 0-0.08 ppm e) 0.06-0.16 ppm f) 0-0.16 ppm g) 0-0.14 ppm	a) 0.06 ppm b) 0.10 ppm c) 0.08 ppm d) 0.05 ppm e) 0.05 ppm f) 0.02 ppm g) 0.08 ppm	a) All males b) All females c) Total males and females d) Males, 20-45 yr e) Females, 20-45 yr f) Males, 56-65 yr g) Females 56-65 yr Additional data available. Autopsy samples from Idaho. Deaths unrelated to Hg poisoning. MERCURY; METALS; BRAIN; LIVER; KIDNEYS; BIOACCUMULATION; AUTOPSIES; IDAHO	Gabica, J. Benson, W. Loomis, N. 1975
2646 Brain		AAS	1	Not given	29 ug/100 g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 14. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; IOWA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Rawes, L.K. Jensen, R.L. Roberts, R.J. 1976

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Mercury
7439-97-6
Hg
Atw 200.59, MP -38.87 C, BP 356.72 C, VP 2E10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2647 Hair		AAS	1	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1 ng/mg b) 6.5 ng/mg c) 7 ng/mg d) 10 ng/mg e) 9 ng/mg	a) 0.5 cm b) 2.5 cm c) 4.5 cm d) 9.5 cm e) 14 cm Distance along length of hair from cut end. Japanese female 6 mo after move to U.S. METALS; MERCURY; HAIR; MEASUREMENT METHODS; JAPAN	Giovanoli-Jakubczak, T. Greenwood, M.R. Smith, J.C. Clarkson, T.W. 1974
2648 Hair		NA	11	1.70-8.15 ppm	2.98 ppm	Scalp hair Cohorc from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
2649 Hair		AAS	a) 126 b) 90 c) 71 d) 85 e) 77 f) 28 g) 179 h) 108 i) 102 j) 109	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given	a) 0.88 ug/g b) 1.00 ug/g c) 0.73 ug/g d) 0.66 ug/g e) 1.01 ug/g f) 0.67 ug/g g) 0.59 ug/g h) 0.94 ug/g i) 0.58 ug/g j) 0.99 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children d) Long Island adults e) Queens adults f) Bronx adults g) Male children h) Female children i) Male adults j) Female adults Correlations between Hg and the following: dust, community location, and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
2650 Hair						Review. Emphasis on diagnostic signs and symptoms which furnish early warning of toxicity. REVIEW; MERCURY; METALS; METAL POISONING; METABOLISM; HEALTH HAZARDS; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; POPULATION EXPOSURE; FOOD CONTAMINATION; OCCUPATIONAL HAZARDS; BLOOD; URINE; HAIR	Gerstner, H.B. Huff, J.E. 1977

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2E10(E-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2651 Hair		AAS	a) 230 b) 94	a) Not given b) Not given	a) 1.35 ug/g b) 2.73 ug/g	a) Maternal b) Fetal Medians, on dry wt basis. Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.R. Schalert, A. Wilson, D. Larson, K. Dyer, W. Mansour, R. Schaffner, W. Hoffman, L. Davies, J. 1976
2652 Heart		AAS	1	Not given	95 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 98. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; TOXA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; INFANT	Robillard, J.E. Hamon, L.R. Jensen, R.L. Roberts, R.J. 1976
2653 Kidney			a) 58 b) 26 c) 94 d) 8 e) 8 f) 32 g) 7	a) 0-15.70 ppm b) 0-12.50 ppm c) 0-15.70 ppm d) 0-3.04 ppm e) 0.05-0.95 ppm f) 0-7.56 ppm g) 0-0.91 ppm	a) 1.06 ppm b) 1.53 ppm c) 1.04 ppm d) 0.77 ppm e) 0.33 ppm f) 0.56 ppm g) 0.50 ppm	a) All males b) All females c) Total males and females d) Males, 20-65 yr e) Females, 20-65 yr f) Males, 56-65 yr g) Females 56-65 yr Additional data available. Autopsy samples from Idaho. Deaths unrelated to Hg poisoning. MERCURY; METALS; BRAIN; LIVER; KIDNEYS; BIOACCUMULATION; AUTOPSIES; IRAQ	Gabica, J. Beason, W. Loomis, H. 1975
2654 Kidney		AAS	1	Not given	2,324 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 98. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; TOXA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; INFANT	Robillard, J.E. Hamon, L.R. Jensen, R.L. Roberts, R.J. 1976

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(P-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2655 Liver		Dithizone	a) 61 b) 45 c) 106 d) 8 e) 5 f) 12 g) 8	a) 0-2.11 ppm b) 0-5.80 ppm c) 0-5.80 ppm d) 0-0.37 ppm e) 0-0.41 ppm f) 0-0.31 ppm g) 0-2.26 ppm	a) 0.15 ppm b) 0.53 ppm c) 0.34 ppm d) 0.19 ppm e) 0.14 ppm f) 0.06 ppm g) 0.63 ppm	a) All males b) All females c) Total males and females d) Males, 20-45 yr e) Females, 20-45 yr f) Males, 56-65 yr g) Females 56-65 yr Additional data available. Autopsy samples from Idaho. Deaths unrelated to Hg poisoning. MERCURY; METALS; BRAIN; LIVER; KIDNEYS; BIOACCUMULATION; AUTOPSIES; IDAHO	Gabica, J. Benson, W. Loomis, R. 1975
2656 Liver		AAS	1	Not given	1,201 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 14. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; IONA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Ramos, L.E. Jensen, B.L. Roberts, B.J. 1976
2657 Lung			1	Not applicable	720 mg	Autopsy. Mercury-filled bag of intestinal tube ruptured in oropharynx 22 yr earlier. Patient, 78 yr old, at Veterans Administration Hospital, West Roxbury, MA, who died of pneumonia. Chronic lung disease, chronic pleural effusions, pulmonary granulomas, bronchiectasis, thought due to slow progressive fibrosis caused by Hg. Hg globules in many foci in lower lobes surrounded by dense fibrous tissue. Empty spaces left by Hg surrounded by multinucleated giant cells, epitheloid cells, fibroblasts in the periphery. Bronchial mucosa showed hyperplastic changes with focal ossification. Mediastinum filled with fibrous adhesions. MERCURY; METALS; LUNGS; MASSACHUSETTS; AUTOPSIES; CASE HISTORIES; DISEASES	Dzau, V.J. Szabo, S. Chang, T.C. 1977
2658 Lung		AAS	1	Not given	489 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 14. Cause of death uncertain. Mercurial nephrotoxicity. MERCURY; IONA; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Ramos, L.E. Jensen, B.L. Roberts, B.J. 1976

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Mercury
7439-97-6
Hg
AtW 200.59, MP -38.87 C, BP 356.72 C, VP 2E10(9-3) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2659 Muscle		AAS	1	Not given	227 ug/g	Autopsy 3-mo-old with congenital heart disease admitted in acute renal failure following intoxication with mercaptomerin. Died on day 14. Cause of death uncertain. Mercurial nephrotoxicity MERCURY; IONS; METAL POISONING; HEART; LUNGS; LIVER; KIDNEYS; BRAIN; MUSCLES; ADIPOSE TISSUE; DISEASES; INFANTS; LAVAGE	Robillard, J.E. Rosen, L.E. Jensen, N.L. Roberts, R.J. 1976
2660 Placenta		AAS	3061	Not given	0.129 + or - 0.161 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; PRESSURE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Reglan, R.J. Brul, A.R. Schubert, A. Wilson, D. Larsen, N. Dyer, N. Mansour, N. Schaffner, W. Hoffman, L. Davies, J. 1976
2661 Urine	Ingestion	Dithizone	39	20-930 ug/l	Not given	Fungicide methoxyethyl mercuric acetate (2% ethylmercuric chloride and 12% guesa BHC) mixed at a ratio of 1.8 g/kg corn. Members of the village of Yalovi in southern Ghana. Abdominal colic, diarrhea, nausea, vomiting, anorexia, fatigue, muscular pain and/or central nervous system impairments. Death due to dehydration, shock and renal failure. METALS; MERCURY; FUNGICIDES; URINE; FOOD CONTAMINATION	Derban, L.K.A. 1976
2662 Urine	Dermal		1	a) Not applicable b) Not applicable	a) 1.6 ug/l b) 2.4 ug/l	a) At admission b) At the time of probenecid therapy (1.9 mg Hg/24 hr) 25-yr-old male occupationally exposed to Hg. Mercury encephalopathy Extrapyramidal motor disorders including walking ataxia, adiadochokinesia. No pyramid track signal, pallesthesia, sensitivity to posture. BISMUTH; MERCURY; METALS; METAL POISONING; URINE; BLOOD; SPINAL FLUID; GERMANY; NEUROLOGIC MANIFESTATIONS	Cramer, K. Renaud, B. Billiard, M. Mouret, J. Manners, R. 1976

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MERCURY
7439-97-6
Hg
AW 200.59, MP -38.87 C, BP 356.72 C, VP 2X10(M-2) mm Hg at 25 C, 100 mm Hg at 260 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2663 Urine						Review. Emphasis on diagnostic signs and symptoms which furnish early warning of toxicity. REVIEW; MERCURY; METALS; METAL POISONING; METABOLISM; HEALTH HAZARDS; MERCURY INORGANIC COMPOUNDS; MERCURY ORGANIC COMPOUNDS; POPULATION EXPOSURE; FOOD CONTAMINATION; OCCUPATIONAL HAZARDS; BLOOD; URINE; HAIR	Gerstner, H.B. Huff, J.E. 1977
2664 Urine		NA	a) 1 b) 1	a) 2.3-11.4 ug/24 hr b) 2.5-6 ug/24 hr	a) 7.3 ug/24 hr b) 4.2 ug/24 hr	a) Healthy male, 4 samples over 3 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, B. Speecke, A. Hoste, J. 1975
2665 Urine	Ingestion		1	Not given	<15 ug/24 hr	Excretion/24 hr. This level considered normal. By 3 wk all Hg, visible by X-ray in GI tract, had passed into the feces. 17-yr-old male ingested 200 g (95 ml) of Hg from clock pendulum. Treated with mild aperients, developed no symptoms. MERCURY; METAL POISONING; GASTROINTESTINAL SYSTEM; FECES; URINE; UNITED KINGDOM; LAVAGE; CASE HISTORIES	Wright, N. Yeoman, W.B. Carter, G.F. 1980
2666 Urine	Injection	AAS	1	a) Not applicable b) Not applicable c) 500-600 ug/day	a) 282 ug/day b) 900 ug/day c) Not given	a) 2 days after injections b) 16 days after injections c) After excision of abscesses 0.1 ml, subcutaneously at each of 4 different sites. 13 yr old METALS; MERCURY; BLOOD PLASMA; URINE; CASE HISTORIES; PENNSYLVANIA; ADOLESCENTS; METAL POISONING	Krohn, I.T. Solof, A. Mobine, J. Wagner, D.E. 1980

Mercury(1+), methyl-, iso (8 CI)
Mercury(1+), methyl- (9 CI)
22967-92-6
C-83-8q
MW 215.63

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2667 Blood, cells	Ingestion		6	a) 1.5-10.8 ng/ml b) 78.7-123.8 ng/ml	a) 7.7 ng/ml b) 102.8 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-10 hr. Dose approximately 20 ug/kg. Healthy adults, 19-44 yr old, weighing 60-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980
2668 Blood, plasma	Ingestion		6	a) 0-0.5 ng/ml b) 2.9-6.7 ng/ml	a) 0.2 ng/ml b) 4.6 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-10 hr. Dose approximately 20 ug/kg. Healthy adults, 19-44 yr old, weighing 60-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980
2669 Blood, whole	Ingestion		6	a) 0.9-7.2 ng/ml b) 39.1-59.2 ng/ml	a) 3.9 ng/ml b) 49.9 ng/ml	a) Before fish meal b) After meal Peaks in 4.7-10 hr. Dose approximately 20 ug/kg. Healthy adults, 19-44 yr old, weighing 60-92 kg. BLOOD; BLOOD PLASMA; ERYTHROCYTES; MERCURY; METALS; METHYL MERCURY COMPOUNDS; FISHES; CANADA; DIETS	Kershaw, T.G. Dhahir, P.H. Clarkson, T.W. 1980

Methanesulfonanilide, 4'-(1-hydroxy-2-(isopropylamino)ethyl)- (9 CI)
Methanesulfonamide, N-(4-(1-hydroxy-2-((1-methylethyl)amino)ethyl)phenyl)- (9 CI)
3930-20-9
C12-H20-N2-O3-S
MW 272.36

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2670 Blood, plasma	Ingestion	Fluorometry	32	a) 1.375-2.45 ug/ml b) 0.72-1.90 ug/ml	a) Not applicable b) Not applicable	a) Range of means at 4 and 12 hr after 160 mg. Initial value, 0.95 ug/ml at 1 hr b) Range of individual values at 4 hr after 160 mg Kinetic parameters not correlated with those of antipyrine or liver P-450 activity. 29 patients with hypertension, 9 with angina pectoris, with normal kidney and renal function, fasted. Ages 38-65 yr. DRUGS; FINLAND; BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; ENZYMES; METABOLISM; HYPERTENSION; HEART DISEASES; ADULTS; ANTIPYRETICS	Sotaniemi, E.A. Arttila, H. Pelkonen, O. Jarvensivu, P. Sundquist, H. 1979
2671 Blood, plasma	Ingestion	Fluorometry	a) 7 b) 6 c) 6	a) 1420-180 ng/ml b) 120-890 ng/ml c) 920-53 ng/ml	a) Not applicable b) Not applicable c) Not applicable	a) Elderly, 2.9 and 24 hr after 160-mg dose. Initial value, 400 ng/ml at 0.5 hr b) Young, healthy, 0.5 and 3 hr after 160-mg dose. Final value, 125 ng/ml at 24 hr c) Young, healthy, 3 and 24 hr after 80-mg dose. Initial value, 65 ng/ml at 0.5 hr Nonexponential decline. Estimated from graphs. Healthy males, 19-35 yr old, male & female hypertensive patients, 60-74 yr old, some on diuretics. Fasted overnight. Reduction in exercise exercise heart rate correlated with log plasma level, r=0.66, P<0.001. Also reductions in blood pressure. DRUGS; METABOLISM; AGE; COMPARATIVE EVALUATIONS; BLOOD PLASMA; URINE; HYPERTENSION; DRUG THERAPY; ADULTS; BLOOD PRESSURE	Ishizaki, T. Hirayama, H. Yamura, K. Nakaya, H. Sato, H. Sato, K. 1980
2672 Urine	Ingestion	Fluorometry	21	a) Not given b) Not given	a) 87.6 + or - 5.8% of dose b) 78.5 + or - 6.7% of dose	a) Young b) Elderly 0-48 hr cumulative excretion of unchanged drug after 80 or 160 mg. Healthy males, 19-35 yr old, male & female hypertensive patients, ages 60-74, some on diuretics. Fasted overnight. Reduction in exercise exercise heart rate correlated with log plasma level, r=0.66, P<0.001. Also reductions in blood pressure. DRUGS; METABOLISM; AGE; COMPARATIVE EVALUATIONS; BLOOD PLASMA; URINE; HYPERTENSION; DRUG THERAPY; ADULTS; BLOOD PRESSURE	Ishizaki, T. Hirayama, H. Yamura, K. Nakaya, H. Sato, H. Sato, K. 1980

Methanol
67-56-1
C-88-0
MW 32.04, MP -97.8 C, BP 64.7 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2673 Blood	Dermal	Colorimetry	1	Not applicable	40 mg/dl	Feds accidentally soaked with methanol. Applied to child's chest 12 hr/night for 2 nights. Levels in urine and peritoneal fluid not quantitated. 9 mo old patient admitted to hospital in Brussels, Belgium. Increasing drowsiness, dyspnea followed by Stage III coma, hypothermia and episodes of bradycardia. Death after drop in arterial blood pressure. Severe metabolic acidosis, complete hepatic necrosis, indications of necrosis of brain and muscle. ALCOHOLS; METHANOL; BLOOD; CASE HISTORIES; ENZYMES; INFANTS; BELGIUM	Kath, A. Blum, D. 1979

Methionine, L- (8 CI)
L-Methionine (9 CI)
63-68-3
C5-H11-N-O2-S
MW 149.21, MP 280-282 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2674 Blood, cells	Ingestion	CC	5	a) 2.3-3.0 umoles/100 g b) 2.2-3.0 umoles/100 g	a) 8.2 umoles/100 g b) 6.7 umoles/100 g	a) After L-methionine. Peak at 0.5 hr b) After N-acetyl-L-methionine. Peak at 45 min 0-4 hr range of means and mean peaks in erythrocytes after 0.0605 umoles/kg. Estimates from graph. Normal adult subjects, about 24 yr old, fasted before and after dose. AMINO ACIDS; BLOOD PLASMA; ERYTHROCYTES; URINE; ADULTS; IOWA	Steglnk, L.D. Filer, L.J., Jr. Faker, G.L. 1980
2675 Blood, plasma	Ingestion	CC	5	a) 3.5-4.9 umols/l b) 3.5-4.90 umoles/l c) 3.43-4.92 umoles/l	a) 2.74 umoles/l b) 2.82 umoles/l c) Not given	a) After L-methionine. Peak, 9 umoles/l at 0.5 hr b) After N-acetyl-L Methionine. Peak 7.38 umoles/l, at 45 min c) After N-acetyl-L-methionine, after acylase treatment. Peak, 8.37 umoles/l at 0.5 hr 0-4 hr range of means and 0-4 hr mean incremental levels computed from area-under-the-curve data, after 0.0605 umoles/kg. Normal adults, about 24.0 yr old, fasted before and after dose. AMINO ACIDS; BLOOD PLASMA; ERYTHROCYTES; URINE; ADULTS; IOWA	Steglnk, L.D. Filer, L.J., Jr. Baker, G.L. 1980
2676 Urine	Ingestion	CC	5	a) 0.178-0.228 umoles/mg b) 0.177-0.201 umoles/mg	a) Not applicable b) Not applicable	a) L-methionine treatment b) N-acetyl-L-methionine Before to 8 hr after 0.0605 umoles/kg. Normal adult subjects, about 24 yr old, before and after dose. AMINO ACIDS; BLOOD PLASMA; ERYTHROCYTES; URINE; ADULTS; IOWA	Steglnk, L.D. Filer, L.J., Jr. Baker, G.L. 1980

Mineral dust (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2677 Lung	Inhalation		a) 13 b) 10 c) 7	a) 2.6-33.0 mg/g b) 0.2-9.3 mg/g c) 5-35 mg/g	a) 9.5 mg/g b) 2.8 mg/g c) 19 mg/g	a) Pittsburgh residents b) Charleston residents c) Asbestos workers Levels based on dry wt of lung tissue. FIBERS; ASBESTOS; LUNGS; PENNSYLVANIA; SOUTH CAROLINA; OCCUPATIONAL HAZARDS	Gross, P. Harley, R.A. Davis, J.M.G. Cralley, L.J. 1974

Mineral fibers (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2678 Lung	Inhalation	TEM DIFFRACTION	30	a) 5-170 b) 470-6750 c) 370-4,810 d) 0.5-48.8 e) 150-6,600 f) 47-4,650 g) 22,000-24,000[sic] h) 19,300-340,000 i) 15,700-146,000	a) 85 b) 1,800 c) 1,200 d) 7 e) 1,300 f) 900 g) 4,000[sic] h) 150,000 i) 80,000	a) 13 Pittsburgh residents, optical-size fibers b) 13 Pittsburgh residents, EM-size fibers c) 13 Pittsburgh residents, fibers <5 u long d) 10 Charleston residents, optical-size fibers e) 10 Charleston residents, EM-size fibers f) 10 Charleston residents, fibers <5 u long g) 7 Asbestos workers, optical-size fibers h) 7 Asbestos workers, EM-size fibers i) 7 Asbestos workers, fibers < 5 u long Number of fibers x 1,000/g dry lung FIBERS; ASBESTOS; LUNGS; PENNSYLVANIA; SOUTH CAROLINA; OCCUPATIONAL HAZARDS	Gross, P. Harley, R.A. Davis, J.M.G. Cralley, L.J. 1974

Molybdenum
7439-98-7
Mo
Atw 95.94, MP 2622 C, BP 4825 C (approx), VP 1 mm Hg at 3300 C, 10 mm Hg at 3770 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2679 Blood, plasma	Inhalation	AAS	a) 14 b) 28	a) 9-365 ng/ml b) 0-34 ng/ml	a) 121 ng/ml b) Not given	a) Workers in molybdenite roasting plant b) Controls-students and research personnel About 1/2 the workers had diarrhea, joint pains, back pains, headaches, and skin or hair changes. BLOOD; COLORADO; COPPER; MOLYBDENUM; HEALTH HAZARDS; INDUSTRIAL PLANTS; URINE; METALS; TRACE ELEMENTS	Walravens, P.A. Moure-Eraso, E. Solomons, C.C. Chappell, W.R. Bentley, G. 1979
2680 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.97 ppm (13%) b) 1.92 ppm (23%) c) 2.11 ppm (25%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
2681 Liver		ES		a) Not given b) Not given c) Not given	a) 3.42 ppm (72%) b) 4.99 ppm (86%) c) 5.01 ppm (88%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
2682 Spleen		ES		a) Not given b) Not given c) Not given	a) 3.47 ppm (28%) b) 4.80 ppm (52%) c) 3.21 ppm (47%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978

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Molybdenum
7439-98-7
Mo
AtW 95.94, MP 2622 C, BP 4825 C (approx), VP 1 mm Hg at 3300 C, 10 mm Hg at 3770 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2683 Urine	Inhalation	AAS	a) 14 b) 24	a) 120-11,000 ug/l b) 20-230 ug/l	a) 1790 ug/l b) Not given	a) Workers in molybdenite roasting plant b) Controls-students and research personnel About 1/2 the workers had diarrhea, joint pains, back pains, headaches, and skin or hair changes. BLOOD; COLORADO; COPPER; MOLYBDENUM; HEALTH HAZARDS; INDUSTRIAL PLANTS; URINE; METALS; TRACE ELEMENTS	Walravens, P.A. Moure-Eraso, R. Solomons, C.C. Chappell, W.R. Bentley, G. 1979

Morphinan-3,14-diol,17-(cyclobutylmethyl)- (9 CI)
42408-82-2
C21-H29-N-O2
MW 327.51

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2684 Blood, serum	Injection Ingestion	RIA GC	a) 4 b) 4 c) 4 d) 4	a) 0.24-2.99 ng/ml b) 1.13-1.46 ng/ml c) 0.0-2.27 ng/ml d) 1.04-1.69 ng/ml	a) 1.12 ng/ml b) 1.32 ng/ml c) 0.78 ng/ml d) 1.41 ng/ml	a) 16 mg, oral, RIA analysis b) 2 mg, IM, RIA analysis c) 16 mg, oral, GC-mass fragmentography d) 2 mg, IM, GC-mass fragmentography No significant difference between methods. Healthy males. DRUGS; BLOOD SERUM; MEASUREMENT METHODS; COMPARATIVE EVALUATIONS	Pittman, K.A. Smyth, R.D. Mayol, R.F. 1980

morphinan-3,6alpha-diol, 7,8-didehydro-4,5alpha-epoxy-17-methyl- (8 CI)
morphinan-3,6-diol, 7,8-didehydro-4,5-epoxy-17-methyl- (5alpha,6alpha)- (9 CI)
57-27-2
C17-H19-N-O3
MP 285.33, MP 197 C (metastable phase), 250 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2685 Blood		Immunoenzymatic		6.8-27.8 ng/100 ml	Not applicable	Toxicology cases. Range for 3 solvent extraction systems. DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, R.L. 1978
2686 Blood			121	0.009-16.4 ng/ml	0.52 ng/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; STAB; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2687 Blood, plasma		CC TLC Radiometry	6	a) 135-34 ng/ml b) 120-34 ng/ml c) 115-34 ng/ml d) 108-36 ng/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Intravenous b) Intramuscular c) Subcutaneous d) Oral Values for peak time (<1 hr) -20 hr after administration. Subjects received 5.75 mg morphine sulfate/sq m body surface. Conjugated morphine Normal men, mean age 49 yr, range 38-60 yr. BLOOD; ALKALOIDS; BLOOD PLASMA; DRUGS; METABOLISM	Brunk, S.F. Delle, E. 1978
2688 Blood, plasma		CC TLC Radiometry	6	a) 53-2 ng/ml b) 80-2 ng/ml c) 75-2.3 ng/ml d) 90-1 ng/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Intravenous b) Intramuscular c) Subcutaneous d) Oral Figures are for from 15 min-1 hr after administration. Subjects received 5.75 mg morphine sulfate/sq m body surface. Free morphine Normal men, mean age 49 yr, range 38-60 yr. BLOOD; ALKALOIDS; BLOOD PLASMA; DRUGS; METABOLISM	Brunk, S.F. Delle, E. 1978
2689 Liver		Immunoenzymatic		Not given	59 ng/100 mg	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, R.L. 1978

Morphinan-6-one, 4,5alpha-epoxy-14-hydroxy-3-methoxy-17-methyl- (9 CI)
Morphinan-6-one, 4,5-epoxy-14-hydroxy-3-methoxy-17-methyl-, (5alpha)- (9 CI)
76-42-6
C18-H21-N-04
MP 215.5, MP 218-220 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2040 Blood, plasma	Ingestion	GC	6	a) 0-6.3 ng/ml b) 5.7-21.0 ng/ml c) 8.5-36.5 ng/ml d) 8.7-25.0 ng/ml e) 7.3-11.9 ng/ml f) 1.8-14.3 ng/ml	a) 2.6 ng/ml b) 13.1 ng/ml c) 19.4 ng/ml d) 17.3 ng/ml e) 9.8 ng/ml f) 6.7 ng/ml	a) 20 min b) 40 min c) 60 min d) 90 min e) 4 hr f 8 hr Profiles after dose of 8.5 mg of oxycodone hydrochloride plus 0.38 mg of oxycodone terephthalate. Healthy volunteers. DRUGS; BLOOD PLASMA; MEASUREMENT METHODS; PENNSYLVANIA	Benzi, G.L., Jr. Tan, J.S. 1976

6orphinan-6-one, 4,5alpha-epoxy-3-hydroxy-17-methyl- (9 CI)
6orphinan-6-one, 4,5-epoxy-3-hydroxy-17-methyl-, (5alpha)- (9 CI)
466-99-9
C17-H19-N-O3
MP 205.3°, MP 266-267 C (crystals from ethanol)

Tissue	Dosage route	Analytical method	Number of cases	Range	Mean	General information	Reference
2691 Blood		Immunoenzymatic		Not given	17 ng/100 ml	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, T.L. 1978
2692 Kidney		Immunoenzymatic		Not given	12.7 ng/100 ng	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, T.L. 1978
2693 Liver		Immunoenzymatic		Not given	6.7 ng/100 ng	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, T.L. 1978
2694 Urine	Ingestion	GC/MS	5	a) 0.5-8.6% of dose b) 3.2-6.7% of dose c) 0-2.1% of dose d) 8.4-16.8% of dose e) Not applicable f) Not applicable	a) 2.3% of dose b) 4.8% of dose c) 1.04% of dose d) 9.3% of dose e) 1% of dose f) 0.1% of dose (approximately)	a) 2 hr, free form (3 subjects) b) 2 hr, conjugated form (3 subjects) c) 8 hr, free form (5 subjects) d) 8 hr, conjugated form (5 subjects) e) Dihydroisomorphine (metabolite), 1 subject f) Dihydromorphine (metabolite), day 5 After 8 hr, free form undetectable in 4 of 5 subjects, conjugated form detectable at day 2 in 3 of 5 subjects. Dose, 4 mg, hydrochloride. Healthy, prisoners, 25-46 yr old. DRUGS; METABOLISM; METABOLITES; ANALGESICS; URINE	Cone, J. Phelps, B.H. Gorodetsky, C.W. 1977

Morphinan-6alpha-ol, 7,8-didehydro-4,5alpha-epoxy-3-methoxy-17-methyl- (9 CI)
Morphinan-6-ol, 7,8-didehydro-4,5-epoxy-3-methoxy-17-methyl-, (5alpha,6alpha)- (9 CI)
76-57-3
C18-H21-N-O3
MW 299.36, MP Monohydratic 154-156 C (after drying at 80 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2695 Blood		Immunoenzymatic		Not given	117 ug/100 ml	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAMS; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
2696 Blood			1	Not applicable	0.2 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Sish, T.J. 1978
2697 Blood			37	0.06-15.7 ug/ml	2.9 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, R.L. Goodman, L.S. 1979
2698 Brain		Immunoenzymatic		Not given	160 ug/100 mg	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAMS; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
2699 Liver		Immunoenzymatic		Not given	440 ug/100 mg	Toxicology case DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAMS; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978

Morpholine, 2-((2-ethoxyphenoxy)methyl)-
46817-91-8
C13-H19-N-O3
NM 237.30, NF Hydrochloride 195-196 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2700 Blood, whole	Ingestion	GC Radiometry	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 0.23 ug/ml b) 0.35 ug/ml c) 0.17 ug/ml d) Not detectable	a) 1 hr b) 2 hr c) 6.5 hr d) 12.5 hr Levels by GC after 40-mg dose. Data also available for C14 method. Adult (age 44 and wt 102 kg). DRUGS; URINE; BLOOD; METABOLITES; ADULTS	Case, D.E. Reeves, P.R. 1975
2701 Urine	Ingestion	GC Radiometry	2	a) 3.7-10.3% b) 47.2-57.9% c) 88.3-98.3% d) 91.3-103.0%	a) Not given b) Not given c) Not given d) Not given	a) 0-2.6 hr b) 0-96 hr c) 0-27.1 hr d) 0-95 hr Cumulative percent of dose (6.39 or 1.05 mg/kg) excreted. Adults ages 37 and 44 yr, wt 95 and 102 kg. DRUGS; URINE; BLOOD; METABOLITES; ADULTS	Case, D.E. Reeves, P.R. 1975

Nickel
7440-02-0
Ni
AW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2270 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2702 Adipose		X-ray spectros	3	Not given	0.19 ppm dry wt	Abdominal fat. 2 samples per case. 2 analyses per sample. 1976 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, R.W. Nielson, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2703 Aorta		X-ray spectros	6	Not given	3.24 ppm dry wt	2 samples per case. 2 analyses per sample. 1976 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, R.W. Nielson, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2704 Blood, plasma	Dermal Inhalation	AAS	a) 1 b) 1 c) 1 d) 1 e) 1	a) 2.6-14.2 ug/l b) 8.6-11.4 ug/l c) 2.1-9.3 ug/l d) 1.2-3.9 ug/l e) 0.2-2.2 ug/l	a) 7.98 ug/l b) 8.6 ug/l c) 4.97 ug/l d) 2.66 ug/l e) 1.31 ug/l	a) Workroom air, 0.12-0.16 mg/cu m b) Workroom air, 0.12-0.14 mg/cu m c) Workroom air, 0.05-0.07 mg/cu m d) Workroom air, 0.03-0.04 mg/cu m e) Control with minimal exposure Concentrations obtained from figures. Concentrations in workers plasma following 3 wk vacation, 0.05-0.8 ug/l. 3 males aged 29-30 yr, 1 female aged 43 yr and 1 control aged 53 yr, all employed at electroplating shop. METALS; NICKEL; BLOOD PLASMA; URINE; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; ADULTS; FINLAND	Tola, S. Kilpio, J. Virtano, K. 1979
2705 Hair		SS	11	43-71 ppm	57 ppm	Scalp hair Cancer from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dieson, R. 1977

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Nickel
7440-02-0
Ni
Atm 58.71, mp 1455 C, bp 2837 C, vp 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2706 Hair		ES	a) 126 b) 90 c) 71 d) 179 e) 108 f) 102 g) 109	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.50 ug/g b) 0.40 ug/g c) 0.70 ug/g d) 0.39 ug/g e) 0.79 ug/g f) 0.87 ug/g g) 1.14 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children d) Male children e) Female children f) Male adults g) Female adults Correlations between Ni and the following: dust community location, sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER, IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bangerner, J.F. Pinkerton, C. 1975
2707 Kidney		X-ray spectros	a) 9 b) 6	a) Not given b) Not given	a) 3.46 ppm dry wt b) 1.96 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses per sample. Samples from 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, N.F. Hill, M.W. Nielsen, N.H. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2708 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.82 ppm (27%) b) 1.86 ppm (39%) c) 1.82 ppm (39%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Tedrapranit, T. Alexander, G.V. Gonick, H.C. 1974
2709 Liver		X-ray spectros	5	Not given	1.67 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, N.F. Hill, M.W. Nielsen, N.H. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Nickel
7440-02-0
Ni
Atw 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2710 Liver		ES		a) Not given b) Not given c) Not given	a) 1.85 ppm (16%) b) 2.14 ppm (39%) c) 1.95 ppm (43%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2711 Lung		ES	30	Not detectable-72.5 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, H.J. Holtz, J.L. Gorski, C.H. 1967
2712 Lung		ES	20	Not given	4.3 ug/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2713 Lung		AAS	a) 129 b) 15	a) 0.5-5.0 ug/g dry wt b) Not given	a) 2.5 ug/g dry wt b) 0.6 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974

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Nickel
7440-02-0
Ni
Atw 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2370 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2714 Lung		ES	134	1.8-5.0 ug/g dry wt	3.2 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.E. Crable, J.V. Lintiaca, L.P. Morris, H.B. Holtz, J.L. Hauer, P. Wolovick, F.B. 1971
2715 Lymph node		ES	14	Not given	0.1 ug/100 g dry wt	Pulmonary hiler lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.E. 1971
2716 Pancreas		X-ray spectros	3	Not given	2.86 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, H.W. Nielson, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2717 Spleen		ES		a) Not given b) Not given c) Not given	a) 1.72 ppm (16%) b) 2.11 ppm (38%) c) 1.97 ppm (40%)	a) No renal disease b) Acute renal failure c) Chronic renal failure Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974

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Nickel
7440-02-0
01
AtW 58.71, MP 1455 C, BP 2837 C, VP 10 mm Hg at 2090 C, 100 mm Hg at 2270 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2718 Urine	Dermal Inhalation	AAS	a) 1 b) 1 c) 1 d) 1 e) 1	a) 30.0-120.0 ug/l b) 62.0-93.5 ug/l c) 25.0-96.0 ug/l d) 9.0-40.0 ug/l e) 6.0-10.0 ug/l	a) 89.6 ug/l b) 78.3 ug/l c) 56.5 ug/l d) 20.3 ug/l e) 7.0 ug/l	a) Workroom air, 0.12-0.16 ug/cu m b) Workroom air, 0.12-0.18 ug/cu m c) Workroom air, 0.05-0.07 ug/cu m d) Workroom air, 0.03-0.04 ug/cu m e) Control with minimal exposure Concentrations obtained from figures. Concentrations in workers' urine following 3 wk vacation, 4.0-6.5 ug/l. 3 males aged 29-30 yr, 1 female aged 43 yr and 1 control aged 53 yr, all employed at electroplating shop. METALS; NICKEL; BLOOD PLASMA; URINE; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS; ADULTS; FINLAND	Tola, S. Kilpio, J. Virtamo, H. 1979

Nicotine (8 CI)
Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S)- (9 CI)
54-11-5
C10-H14-N2
mw 162.23, MP <-80 C, BP 247 C (partial decomp) at 765 mm Hg, 123-125 C at 17 mm Hg, VP 1 mm Hg at 61.8 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2719 Blood, plasma	Inhalation Ingestion	GC	a) 10 b) 5 c) 10 d) 5	a) 15.5-80.7 ng/ml b) 23.8-48.4 ng/ml c) 5.4-21.8 ng/ml d) 6.1-10.6 ng/ml	a) 26.5 ng/ml b) 38.2 ng/ml c) 12.2 ng/ml d) 8.0 ng/ml	a) Females 2 min after cigarette b) Males 2 min after cigarette c) Females while taking 2 mg nicotine gum d) Males while taking 2 mg nicotine gum Significant difference between male and females after cigarette. Additional data available. Smokers, aged 21-57 yr, attending the Maudsley Hospital Smokers Clinic in London, United Kingdom NICOTINE; BLOOD PLASMA; ADULTS; SEX; COMPARATIVE EVALUATIONS; UNITED KINGDOM	Russell, M.A. Feyerabend, C. Cole, P.V. 1976
2720 Blood, plasma	Inhalation	GC	10	a) Not given b) Not given c) Not given	a) 38.7 ng/ml b) 29.1 ng/ml c) 17.7 ng/ml	a) Full-length cigarettes b) 3/4-length cigarettes c) 1/2-length cigarettes After 48 hr of smoking ad libitum, usual brand, length of the tobacco column altered as indicated. Significant, P<0.001. Smokers, 24-65 yr old, mean of 26.7 cigarettes/day. SMOKING; TOBACCOS; NICOTINE; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; UNITED KINGDOM	Russell, M.A.H. Sutton, S.R. Feyerabend, C. Saloojee, Y. 1980
2721 Breast fluid		GC/MS Selected ion recording	a) 2 b) 1 c) 2	a) Not given b) Not given c) 46-60 ng/ml	a) 0 ng/ml b) 195 ng/ml c) 55 ng/ml	a) Nonsmokers b) 2 packs per day c) 1 pack per day Study done to determine exposure of breast tissues to exogenous substances. Nonlactating women ALKALOIDS; BREAST; CARCINOGEN; MAMMARY GLANDS; NICOTINE; SMOKING	Petrakis, N.L. Gruenke, L.D. Beelen, T.C. Castagnoli, N., Jr. Craig, J.C. 1978

Nitrate
14797-55-8
N-03
MW 62.01

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2722 Urine	Ingestion	Colorimetry	a) 17 b) 23	a) >0-<40 ug/ml b) >0-<10 ug/ml	a) 10.7 ug/ml b) 3.0 ug/ml	a) Guitarilla residents drinking high-nitrate spring water (high cancer region) b) Controls from Cali (low cancer region) Wide variation within individuals over time. Residents of Colombia from high and low cancer-risk regions. NITRATES; COLOMBIA; URINE; NEOPLASMS; DRINKING WATER; COMPARATIVE EVALUATIONS	Hawksworth, G. Hill, M.J. Gordillo, G. Cuello, C. 1974

Nitric acid sodium salt
7631-99-4
O-N-O3.Na
RW 85.01, RP 308 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2723 Blood	Ingestion	Colorimetry	1	Not given	30.0 mg/l	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 mg/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.R. Street, E. Inserra, P. 1979
2724 Kidney	Ingestion	Colorimetry	1	Not given	19.5 mg/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 mg/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.R. Street, E. Inserra, P. 1979
2725 Muscle	Ingestion	Colorimetry	1	Not given	26 mg/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 mg/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.R. Street, E. Inserra, P. 1979

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Nitric acid sodium salt
7631-99-4
N-N-03.Na
MW 85.01, MP 308 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2726 Stomach	Ingestion	Colorimetry	1	Not given	48 g/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 mg/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.M. Street, E. Inserra, R. 1979

Nitrous acid, sodium salt
7632-00-0
B-N-02.Na
MW 69.01, MP 271 C, BP 320 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2727 Blood	Ingestion	Colorimetry	1	Not given	0.55 ug/l	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 ug/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.M. Street, E. Inserra, B. 1979
2728 Kidney	Ingestion	Colorimetry	1	Not given	0.50 ug/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 ug/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.M. Street, E. Inserra, B. 1979
2729 Muscle	Ingestion	Colorimetry	1	Not given	0.70 ug/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts not detected in bile, vitreous humor or liver (detection limit - 0.20 ug/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.M. Street, E. Inserra, B. 1979

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Nitrous acid, sodium salt
7632-00-0
N-N-02.Na
MW 69.01, MP 271 C, BP 320 C (decomp)

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2730 Stomach	Ingestion	Colorimetry	1	Not given	96 g/kg wet wt	Autopsy 5 hr after death following ingestion of estimated 50 g Na nitrite. Nitrate and nitrite salts are not detected in bile, vitreous humor or liver (detection limit - 0.20 ug/l). 34-yr-old white male, 78 kg. Microscopy revealed congestion of vessels of the gastric mucosa, lungs, liver, spleen, and kidneys, and extravasation of erythrocytes of the gastric mucosa 90% of hemoglobin converted to methemoglobin. NITRATES; AUTOPSIES; CASE HISTORIES; HEMOGLOBINS; BILE; BLOOD; KIDNEYS; LIVER; MUSCLES; STOMACH; SUICIDE; NEW MEXICO	Standefer, J.C. Jones, A.H. Street, K. Inserra, R. 1979

Mcrzimelidine (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2731 blood, plasma		HPLC	15	a) Not given b) Not given c) Not given d) Not given e) 284-1523 nmol/l	a) 663 + or - 50 nmol/l b) 882 + or - 90 nmol/l c) 868 + or - 84 nmol/l d) 856 + or - 81 nmol/l e) Not given	a) 1 wk b) 2 wk c) 4 wk d) 6 wk e) Range of individual values, first week excluded a)-d) range of means Dose, 200 mg/day, 6 wk. Adult in-patients with primary depressive illness. 10 of 15 showed reduced depression. Fewer side-effects than with amitriptyline therapy. DRUGS; DRUG THERAPY; BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; ADULTS; COMPARATIVE EVALUATIONS; NEUROLOGIC MANIFESTATIONS; PSYCHOTROPIC DRUGS; UNITED KINGDOM	Coppen, A. Rao, V.A.R. Swade, C. Wood, K. 1979

o-Anisamide, N-((1-ethyl-2-pyrrolidinyl)methyl)-5-sulfamoyl- (8 CI)
Benzamide, 5-(aminosulfonyl)-N-((1-ethyl-2-pyrrolidinyl)methyl)-2-methoxy- (9 CI)
15676-16-1
C15-H23-N3-04-S
MW 341.43, MP 175-182 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2732 Blood, plasma	Ingestion	Fluorometry	12	0-2.2 ug/ml	Not given	Means before to 4 wk on 800 mg/day. Maximal effect after 1 wk. Estimated from graph. Marked individual variation. Correlated with prolactin, r=0.73. Psychotic women with thought disorders, delusions, and auditory hallucinations. No organic brain disorder, somatic disease, alcoholism or drug abuse. Ages 33 to 65 yr. Side effects included: mild extrapyramidal effects, tension in breasts, somnolence. Reduction in 2 psychopathological rating parameters within 10 days. DRUGS; DRUG THERAPY; NERVOUS SYSTEM DISEASES; SWEDEN; BLOOD PLASMA; SPINAL FLUID; HORMONES; NEUROLOGIC MANIFESTATIONS; ADULTS	Bjerkenstedt, L. Harmryd, C. Sedval, G. 1979
2733 Cerebrospinal fluid	Ingestion	RIA	6	5-42 ng/ml	20 ng/ml	After 4th wk on 800 mg/day. Correlated with plasma level, r=0.80. Pretreatment level about 4 ng/ml. Estimated from graphs. Psychotic women with thought disorders, delusions, and auditory hallucinations. No organic brain disorder, somatic disease, alcoholism or drug abuse. Ages 33 to 65 yr. Side effects included: mild extrapyramidal effects, tension in breasts, somnolence. Reduction in 2 psychopathological rating parameters within 10 days. DRUGS; DRUG THERAPY; NERVOUS SYSTEM DISEASES; SWEDEN; BLOOD PLASMA; SPINAL FLUID; HORMONES; NEUROLOGIC MANIFESTATIONS; ADULTS	Bjerkenstedt, L. Harmryd, C. Sedval, G. 1979

o-Anisamide, 4-amino-5-chloro-N-(2-(diethylamino)ethyl)- (9 CI)
Benzamide, 4-amino-5-chloro-N-(2-(diethylamino)ethyl)-2-methoxy- (9 CI)
7t4-62-5
C14-H22-Cl-N3-O2
MW 299.81, MP Dihydrochloride monohydrate 145 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2734 Blood, plasma	Ingestion		11	a) 26-147 ng/ml b) 47-208 ng/ml	a) 71.3 + or - 11.6 ng/ml b) 126.7 + or - 16.3 ng/ml	a) 3 hr after 3 x 10 mg/day for 28 days b) 3 hr after 3 x 20 mg/day for 28 days Patients, ages 63.9 + or - 2.3 yr, with idiopathic parkinsonism. Increased tremor dose-related. DRUGS; DRUG THERAPY; BLOOD PLASMA; AGE; ADULTS; NEUROMUSCULAR DISEASES; NERVOUS SYSTEM DISEASES; UNITED KINGDOM	Bateman, D.N. Kahn, C. Legg, N.J. Reid, J.L. 1978

Olean-12-en-30-oic acid, 3beta-hydroxy-11-oxo-, hydrogen succinate (8 CI)
Olean-12-en-29-oic acid, 3-(3-carboxy-1-oxopropoxy)-11-oxo-, (3beta,20beta)- (9 CI)
5697-56-3
C34-H50-O7
MW 570.74, MP 291-294 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2735 Blood, serum	Ingestion	GC	a) 12 b) 6	a) 11-80 ug/ml b) 14.5-21 ug/ml	a) 31 ug/ml b) 18 ug/ml	a) Healed ulcers. Patient differences significant b) Unhealed ulcers Means are geometric. Group mean differences highly significant. 19-63 yr old patients with duodenol ulcers in Australia. Single or multiple controllable side effects of: hypertension, weight gain, edema, hypokalemia. 19 of 20 had reduced need for antacids. Ulcer healing greater than in controls. DRUGS; DRUG THERAPY; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS; DISEASES; AUSTRALIA; GASTROINTESTINAL SYSTEM; ANTI-INFLAMMATORY AGENTS; ANALGESICS; HYPERTENSION; STEROIDS	Young, G.P. St. John, D.J.B. Coventry, D.A. 1979

p-Acetophenetidide (9 CI)
Acetamide, N-(4-ethoxyphenyl)- (9 CI)
62-44-2
C10-H13-N-O2
MW 179.21, MP 134-135 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2736 Blood, plasma	Ingestion	RIA TLC	19	a) 100-780 ng/ml b) 90-735 ng/ml c) 222-0.21 ng/ml d) 92-0.80 ng/ml	a) Not given b) Not given c) Not given d) Not given	a) TLC, correlation coefficient 0.997 with RIA, 17 volunteers, 325 mg b) RIA, correlation coefficient 0.997 with TLC, 17 volunteers, 325 mg c) One male, 1 hr (peak)-12 hr after 250 mg, RIA d) One male 1.67 hr (peak)-12 hr after 250 mg, RIA. DRUGS; DRUG THERAPY; NORTH CAROLINA; MEASUREMENT METHODS; BLOOD PLASMA; DOGS; COMPARATIVE EVALUATIONS	Findlay, J.W.A. DeAngelis, R.L. Butz, R.F. Sailstad, J.B. Welch, R.M. 1979
2737 Blood, plasma	Ingestion	GC/MS	7	a) 0.27-1.3 ug/ml b) 2.41-4.06 ug/ml	a) 0.143 ug/ml b) 3.14 ug/ml	a) Phenacetin b) Principal metabolite, N-acetyl-p-aminophenol Range of subjects' 0-7 hr average levels and mean of all subjects after 5 900-mg doses at 6-wk intervals. Levels calculated from area under the curve. Subjects 21-42 yr, fasted before and after dose. DRUGS; METABOLISM; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Alvares, A.P. Kappas, A. Fiserman, J.L. Anderson, K.E. Pantuck, C.B. Pantuck, E.J. Hsiao, K.-C. Garland, W.A. Conney, A.H. 1979
2738 Urine	Ingestion	TLC GC/MS	7	2.6-14.3 mg/24 hr	Not given	Levels of metabolite 3-methylthio-4-hydroxyacetanilide after 1000-1800 mg phenacetin. Healthy volunteers 18-44 yr old DRUGS; METABOLITES; URINE; IN VIVO ANALYSIS; COMPARATIVE EVALUATIONS; NEW JERSEY; NORTH CAROLINA	Klutch, A. Levin, W. Chang, R.L. Vane, F. Conney, A.H. 1978

p-Dioxane (8 CI)
1,4-Dioxane (9 CI)
123-91-1
C4-H8-02
MW 88.10, MP 11.80 C, BP 101.1 C, VP 40 mm Hg at 25.2 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2739 Blood, plasma	Inhalation	GC/MS	4	a) Not given b) Not given c) Not given d) Not given	a) 1.2 ug/ml b) 8.5 ug/ml c) 12.5 ug/ml d) 0.25 ug/ml	a) 0.5 hr b) 2 hr c) 6 hr d) 12 hr During and after 6-hr exposure to 50 ppm. Healthy male subjects (mean age 44 yr, mean weight 84 kg). Eye irritation during exposure. DIOXANES; BLOOD PLASMA; URINE; METABOLITES	Young, J.D. Braun, W.H. Rampy, L.W. Chenoweth, M.B. Blau, G.E. 1977
2740 Urine	Inhalation	GC/MS	4	2,715-4,287 ug/12 hr	3233 ug/12 hr	Total excretion, 6-hr exposure to 50 ppm. Beta-hydroxyethoxyacetic acid metabolite also measured. Healthy male subjects (mean age 44 yr, mean weight 84 kg). Eye irritation during exposure. DIOXANES; BLOOD PLASMA; URINE; METABOLITES	Young, J.D. Braun, W.H. Rampy, L.W. Chenoweth, M.B. Blau, G.E. 1977

p-Hydroxyphenylacetic acid (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2741 Urine	Ingestion	GC	4	a) 10.3-24.6 mg/24 hr b) 14.5-22.4 mg/24 hr	a) 18.7 mg/24 hr b) 20.0 mg/24 hr	a) Standard drug formulation b) Delayed absorption tablets Dosage 2.5-3.5 g/day levodopa. 2 male and 2 female parkinsonian patients aged 61-68 yr. Gastrointestinal side effects with delayed release form. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Sandler, M. Ruthven, C.R.J. Goodwin, B.L. Hunter, K.R. Stern, G.M. 1974

Phenethylamine (8 CI)
Benzeneethanamine (9 CI)
64-04-0
C8-H11-N
MW 121.18, BP 194.5-195 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2742 Blood			1	Not applicable	280 ng/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978

Phenethylamine, alpha-methyl-, (+-)- (8 CI)
Benzeneethanamine, alpha-methyl-, (+-)- (9 CI)
300-62-9
C9-H13-N
MW 135.20, BP 200-203 C at 760 mm Hg, 82-85 C at 13 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2743 Blood, plasma	Ingestion	GC/MS	4	a) 31.5-6.0 ng/ml b) 32.0-10.5 ng/ml	a) Not given b) Not given	a) 1 and 48 hr after 10 mg (+)-amphetamine with NaHCO3. Initial value, 21 ng/ml at 0.5 hr b) 1 and 48 hr after 10 mg (-)-amphetamine with NaHCO3. Initial value, 13 ng/ml at 0.5 hr Estimated from graph. Data available for dose as racemic amphetamine with acid and basic urinary pH. 3 males and 1 female, ages 22-26 yr. DRUGS; KANSAS; ADULTS; BLOOD PLASMA; SALIVA; URINE; COMPARATIVE EVALUATIONS; METABOLISM; PSYCHOTROPIC DRUGS	Wan, S.H. Matin, S.B. Azarnoff, D.L. 1978
2744 Saliva	Ingestion	GC/MS	4	a) 110-12.5 ng/ml b) 120-30 ng/ml	a) Not given b) Not given	a) 2 and 48 hr after 10 mg (+)-amphetamine with NaHCO3. Initial value, 69 ng/ml at 0.5 hr b) 2 and 48 hr after 10 mg (-)-amphetamine with NaHCO3. Initial value, 67 ng/ml at 0.5 hr Estimated from graph. Data available for dose as racemic amphetamine with acid and basic urinary pH. 3 males and 1 female, ages 22-26 yr. DRUGS; KANSAS; ADULTS; BLOOD PLASMA; SALIVA; URINE; COMPARATIVE EVALUATIONS; METABOLISM; PSYCHOTROPIC DRUGS	Wan, S.H. Matin, S.B. Azarnoff, D.L. 1978

Phenethylamine, N-ethyl-alpha-methyl-m-(trifluoromethyl)- (8 CI)
Benzeneethanamine, N-ethyl-alpha-methyl-3-(trifluoromethyl)- (9 CI)
458-24-2
C12-H16-F3-N
MW 231.27, BP 108-112 C at 12 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2745 Blood, plasma	Ingestion	GC	4	a) Not given b) Not given c) Not given d) Not given	a) 0.041 ug/ml b) 0.042 ug/ml c) 0.008 ug/ml d) 0.008 ug/ml	a) d-Fenfluramine at 4 hr (0.018 ug/ml at 30 min and 0.022 ug/ml at 48 hr) b) l-Fenfluramine at 4 hr (0.012 ug/ml at 30 min and 0.019 ug/ml at 48 hr) c) d-Norfenfluramine at 8 hr (<0.002 ug/ml at 30 min and 0.004 ug/ml at 48 hr) d) l-Norfenfluramine at 8 hr (<0.002 ug/ml at 30 min and 0.005 ug/ml at 48 hr) Peaks after 60-mg dose. Healthy volunteers. DRUGS; BLOOD PLASMA; ITALY	Garattini, S. Caccia, S. 1979

Phenol
108-95-2
C6-96-0
MW 94.11, MP 40.85 C, BP 182 C, VP 1 mm Hg at 40.1 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2746 Urine	Ingestion	GC/MS	1	Not applicable	13.8 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Mosemar, R.F. 1978
2747 Urine	Ingestion	GC	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 260.0 ppm b) 5.5 ppm c) 25.0 ppm d) 0.5 ppm e) 10.0 ppm f) 1.00 ppm	a) Peak total phenol 9 hr after Pepto-Bismol for 9 hr at 28.35 g/hr b) Total phenol 40 hr after Pepto-Bismol for 9 hr at 28.35 g/hr c) Peak free phenol 9 hr after phenyl salicylate for 8 hr at 90 mg/hr d) Free phenol 72 hr after phenyl salicylate for 8 hr at 90 mg/hr e) Peak free phenol 9 hr after 1 chloraseptic lozenge every 2 hr for 16 hr f) Free phenol 64 hr after 1 chloraseptic lozenge every 2 hr for 16 hr 45 yr old employee of Dow Chemical U.S.A. in Michigan. DRUGS; PHENOLS; URINE; COMPARATIVE EVALUATIONS; MICHIGAN	Fishbeck, W.A. Langner, R.R. Koriba, R.J. 1975

Phenol, m-(2-aminoethyl)- (8 CI)
Phenol, 3-(2-aminoethyl)- (9 CI)
588-05-6
C8-H11-N-O
MW 137.18, MP 164-165 C (crystals from benzene and alcohol)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2748 Urine	Ingestion	GC	4	a) 0.6-1.6 mg/24 hr b) 0.6-2.8 mg/24 hr	a) 0.95 mg/24 hr b) 1.65 mg/24 hr	a) Standard drug formulation b) Delayed absorption tablets Dosage 2.5-3.5 g/day levodopa. 2 male and 2 female parkinsonian patients aged 61-68 yr. Gastrointestinal side effects with delayed release form. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Sandler, M. Puthven, C.H.J. Goodwin, B.L. Hunter, K.P. Stern, G.M. 1974

Phenol, p-amino- (9 CI)
Phenol, 4-amino- (9 CI)
123-30-8
C6-H7-N-O
MW 109.12, MP 189.6-190.2 C, commercial 186 C, BP 284 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2749 Urine	Ingestion		6	Not given	24.0%	6x100 mg tablets of phenazopyridine hydrochloride. % of dose in 24-hr urine. 6 healthy males, aged 25 to 40 yrs. DRUGS; METABOLITES; URINE; CANADA	Johnson, W.J. Chartrand, A. 1976

Phenol, p-nitro- (8 CI)
Phenol, 4-nitro- (9 CI)
100-02-7
C6-H5-N-O3
MW 139.11, MP 114.9-115.6 C, BP 279 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2750 Urine	Ingestion	GC-EC	4	a) 0.08-0.20 mg/l b) 0.16-0.61 mg/l c) 0.04-0.11 mg/l d) 0.10-0.30 mg/l	a) 0.13 mg/l (0.29 mg/24 hr) b) 0.34 mg/l (0.58 mg/24 hr) c) 0.06 mg/l (0.13 mg/24 hr) d) 0.17 mg/l (0.30 mg/24 hr)	a) 2 mg/day of methyl parathion b) 4 mg/day of methyl parathion c) 1 mg/day of ethyl parathion d) 2 mg/day of ethyl parathion PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Hetzler, H.L. Slack, E.F. Lin, L.L. 1977

Phenol, pentachloro-
87-86-5
C6-H-Cl5-O
MW 266.35, MP 190-191 C, BP 309-310 C (decomp), VP 40 mm Hg at 211.2 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2751 Adipose		GC-EC	25	Not detected - 0.57 ppm	0.14 + or - 0.04 ppm	Non-occupational exposure. Limit of detection 5 ppb. Adipose tissue via medical examiners at hospitals in Kyoto and Osaka in 1974, children and adults. JAPAN; PENTACHLOROPHENOL; PHENOLS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; INSECTICIDES; FUNGICIDES	Ohe, T. 1979
2752 Adipose		GC-EC	10	10-90 ppb	23 ppb	Anterior abdominal wall tissue. Autopsies by medical examiner, Dade County, FL CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2753 Blood, plasma		GC-EC	a) 23 b) 23 c) 14	a) Not given b) Not given c) Not given	a) 15.86 ug/l b) 15.69 ug/l c) 15.00 ug/l	a) Patients on hemodialysis for chronic renal failure, predialysis b) Patients on hemodialysis for chronic renal failure, postdialysis c) Controls Patients at Charity Hospital in New Orleans, Louisiana, and relatives of patients (controls) or workers at the unit (controls) PESTICIDES; BLOOD PLASMA; LOUISIANA; DIE; DDT; PENTACHLOROPHENOL	Pearson, J.E. Schultz, C.D. Rivers, J.E. Gonzalez, F.M. 1976
2754 Blood, serum		GC-EC	a) 33 b) 25	a) 10-98 ppb b) 11-120 ppb c) 10-98 ppb d) 11-71 ppb	a) 29.12 + or - 18.7 ppb b) 48.48 + or - 28.5 ppb c) 29.75 + or - 24.3 ppb d) 35.0 + or - 20.2 ppb	a) City water users b) Well water users c) Subgroup, 12 city water users in a), 10 with detectable water levels (117.2 plus or minus 88.7 ppb) d) Subgroup, 10 well water users in b). 9 with detectable water levels (54.5 + or - 23.4 ppb) Limits of detection: water 0.3 ppb serum 30 ppb. 58 white females, Dade County FL, each with drinking usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980

Phenol, 2,2'-methylenebis(3,4,6-trichloro-
70-30-4
C13-H6-Cl6-O2
MW 406.92, MP 164-165 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2755 Blood	Dermal	GC-EC	a) 43 b) 18 c) 18	a) 9.0-11.8 ng/ml b) 638.7-395.8 ng/ml c) 655.3-330.8 ng/ml	a) Not given b) Not applicable c) Not applicable	a) Range of mean initial levels before using pHisoHex or Hyperphaze b) Peak (wk 4) and 8-wk value for pHisoHex means c) Peak (wk 4) and 8-wk value for Hyperphaze means Daily complete body washing, 3 min, 30 ml containing 900 mg hexachlorophene, then rinse, during 8-wk period. Levels returned to normal 2-3 wk after ending use. No age, sex, body weight, or race effects. Adults without skin or systemic disease. No adverse systemic effects. HEXACHLOROPHENE; ADULTS; BIOACCUMULATION; COMPARATIVE EVALUATIONS	Calesmick, B. Costello, C.H. Ryan, J.P. DiGregorio, G.J. 1975
2756 Blood, plasma	Ingestion		1	88-50 ug/ml	Not given	levels 24 and 48 hr after ingestion, respectively. Infant accidentally fed 10-15 ml pHisoHex (100 mg/kg hexachlorophene) was later admitted to hospital for gastric washings. 8 day old, 2,800 gm Puerto Rican. Vomiting, diarrhea, dehydration, lethargy, poor response to painful stimulation, facial twitching, accentuated blinking, exaggerated startle response. AGE; NEWBORN; BLOOD PLASMA; CASE HISTORIES; CHLORINE ORGANIC COMPOUNDS; HEXACHLOROPHENE; NEUROLOGIC MANIFESTATIONS; MASSACHUSETTS	Hernkovitz, J. Rosman, N.P. 1979
2757 Blood, whole	Dermal	GC	a) 166 b) 340 c) 32	a) 0.280 + or - 0.295 to 0.771 + or - 0.400 umol/l b) 0.122 + or - 0.105 to 0.161 + or - 0.183 umol/l c) 0.159-0.220 umol/l	a) Not given b) Not given c) Not given	a) Range of means. 382 specimens from 1-10 day old infants undergoing routine skin care with pHisoHex (3.0% hexachlorophene) b) Range of means. 3-7 day old infants undergoing routine skin care with pHisoHex (0.75% hexachlorophene) c) Range of means. Newborns powdered 3-14 days with 0.5% hexachlorophene talc (0.5 mg/day) DRUGS; HEXACHLOROPHENE; BLOOD; INFANTS; NEWBORN; AUSTRALIA	Plueckhahn, V.D. Pallard, B.A. Banks, J.M. Collins, B.B. Flett, P.T. 1978
2758 Integumen t	Dermal	Radiometry	6	a) 0.070-0.877 ug/sq cm b) <0.001-0.170 ug/sq cm	a) Not given b) Not given	a) 10 min b) 2 days Uptake of label in dermis and epidermis after washing with 0% conventional soap suspension or 10% non-soap detergent. DRUGS; DEODORANTS; SKIN	Black, J.G. Sprott, W.E. Howes, D. Retherford, T. 1974

Phenol, 2,3,4,5-tetrachloro-
4901-51-3
C6-H2-Cl4-O
MW 231.89, MP 116-117 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2759 Adipose		GC-EC	10	None detected	None detected	Limit of detection 0.19 ppm Autopsies by medical examiner, Dade County, FL CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Parquet, A. Pfaffenberger, C.D. 1980
2760 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.09 ppm 58 white females Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Parquet, A. Pfaffenberger, C.D. 1980

Phenol, 2,3,4,6-tetrachloro-
58-90-2
C6-H2-Cl4-O
MW 231.9, MP 69-70 C, 288 C (decomp), VP 1 mm Hg at 100.0 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2761 Adipose		GC-EC	10	None detected	None detected	Limit of detection 0.09 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Parquet, A. Pfaffenberger, C.D. 1980
2762 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.04 ppm 58 white females Dade County, FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Parquet, A. Pfaffenberger, C.D. 1980

Phenol, 2,3,5-trichloro-
933-78-8
C6-H3-Cl3-O
MW 197.45, MP 62 C, BP 248.5-249.5 at 250 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2763 Adipose		GC-EC	10	None detected	None detected	Limits of detection 0.28 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2764 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.10 ppm 58 white females, Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2765 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.78 ppm 58 white females, Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980

Phenol, 2,4-dichloro-
120-83-2
C6-H4-Cl2-O
MW 163.0, MP 45 C, BP 209-210 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2766 Adipose		GC-EC	10	None detected	None detected	Limit of detection 4.69 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2767 Urine		GC-EC	2	278-1.1 ppm	Not applicable	Change, 1 to 34 days after 170.1-g ingestion of 75% dichlofenthion by a 62-yr-old. Suicidal ingestion. Slow onset and evolution of cholinergic symptoms. Deceptively mild initially, later severe & life-threatening due to respiratory embarrassment. Protracted, waxing and waning clinical course. Delayed onset of respiratory insufficiency and other cholinergic effects. Bleeding from the GI tract, hypokalemia, mild encephalpathy. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, M.E. Vaclavek, C. 1975

Phenol, 2,4,5-trichloro-
95-95-4
C6-H3-Cl3-O
MW 197.5, BP 252 C, VP 1 mm Hg at 72 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2768 Adipose		GC-EC	10	None detected	None detected	Limit of detection 0.32 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2769 Blood, serum		GC-EC	58	None detected	None detected	Limits of detection 0.07 ppm 58 white females, Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980

Phenol, 2,4,6-trichloro-
88-06-2
C6-H3-Cl3-O
MW 197.5, MP 68 C, BP 246.5 C, VP 1 mm Hg at 76.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2770 Adipose		GC-EC	10	None detected	None detected	Limit of detection 0.09 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2771 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.03 ppm 58 white females Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980

Phenol, 4-bromo-2,5-dichloro-
1940-42-7
C6-H3-Br-Cl2-O
MW 241.99

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2772 Adipose		GC-EC	10	None detected	None detected	Limit of detection 0.15 ppm Autopsies by medical examiner, Dade County, FL. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980
2773 Blood, serum		GC-EC	58	None detected	None detected	Limit of detection 0.03 ppm 58 white females, Dade County FL, each with drinking water usage pattern > 5 yr. CHLORINE ORGANIC COMPOUNDS; PENTACHLOROPHENOL; BLOOD SERUM; ADIPOSE TISSUE; FUNGICIDES; PESTICIDE RESIDUES; FLORIDA; AUTOPSIES; MEASUREMENT METHODS; DRINKING WATER; ADULTS	Morgade, C. Barquet, A. Pfaffenberger, C.D. 1980

Phenothiazine, 10-(2-(1-methyl-2-piperidyl)ethyl)-2-(methylthio)- (8 CI)
10H-Phenothiazine, 10-(2-(1-methyl-2-piperidinyl)ethyl)-2-(methylthio)- (9 CI)
50-52-2
C21-H26-N2-S2
MW 370.56, MP 72-74 C, BP 230 C at 0.02 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2774 Blood	Ingestion	Fluorometry GC	2	a) Not given b) Not given	a) 7.0 mg/l b) 8.0 mg/l	a) 18-yr-old woman, accidental overdose b) 30-yr-old woman, suicide Data given for distribution of metabolites (oxidation products) Patients died of an overdose, accidental in one case, suicide in the other. BLOOD; BRAIN; DRUG ABUSE; DRUGS; KIDNEYS; LIVER; SUICIDE; SEDATIVES; URINE; METABOLITES	Dinovo, E.C. Bost, R.O. Sunshine, I. Gottschalk, L.A. 1978
2775 Brain	Ingestion	Fluorometry GC	2	a) Not given b) Not given	a) 9.26 mg/kg b) 8.94 mg/kg	a) 18-yr-old woman, accidental overdose b) 30-yr-old woman, suicide Data given for distribution of metabolites (oxidation products) Patients died of an overdose, accidental in one case, suicide in the other. BLOOD; BRAIN; DRUG ABUSE; DRUGS; KIDNEYS; LIVER; SUICIDE; SEDATIVES; URINE; METABOLITES	Dinovo, E.C. Bost, R.O. Sunshine, I. Gottschalk, L.A. 1978
2776 Kidney	Ingestion	Fluorometry GC	2	a) Not given b) Not given	a) 22.78 mg/kg b) 10.20 mg/kg	a) 18-yr-old woman, accidental overdose b) 30-yr-old woman, suicide Data given for distribution of metabolites (oxidation products) Patients died of an overdose, accidental in one case, suicide in the other. BLOOD; BRAIN; DRUG ABUSE; DRUGS; KIDNEYS; LIVER; SUICIDE; SEDATIVES; URINE; METABOLITES	Dinovo, E.C. Bost, R.O. Sunshine, I. Gottschalk, L.A. 1978
2777 Liver	Ingestion	Fluorometry GC	2	a) Not given b) Not given	a) 50.40 mg/kg b) 24.24 mg/kg	a) 18-yr-old woman, accidental overdose b) 30-yr-old woman, suicide Data given for distribution of metabolites (oxidation products) Patients died of an overdose, accidental in one case, suicide in the other. BLOOD; BRAIN; DRUG ABUSE; DRUGS; KIDNEYS; LIVER; SUICIDE; SEDATIVES; URINE; METABOLITES	Dinovo, E.C. Bost, R.O. Sunshine, I. Gottschalk, L.A. 1978
2778 Urine	Ingestion	Fluorometry GC	2	a) Not given b) Not given	a) 46.0 mg/l b) 36.0 mg/l	a) 18-yr-old woman, accidental overdose b) 30-yr-old woman, suicide Data given for distribution of metabolites (oxidation products) Patients died of an overdose, accidental in one case, suicide in the other. BLOOD; BRAIN; DRUG ABUSE; DRUGS; KIDNEYS; LIVER; SUICIDE; SEDATIVES; URINE; METABOLITES	Dinovo, E.C. Bost, R.O. Sunshine, I. Gottschalk, L.A. 1978

Phenothiazine, 2-chloro-10-(3-(dimethylamino)propyl)- (8 CI)
10H-Phenothiazine-10-propanamine, 2-chloro-N,N-dimethyl- (9 CI)
50-53-3
C17-H19-Cl-N2-S
MW 318.86, MP Picrate 172-173 C, BP 200-205 C at 0.8 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2779 Blood			11	0.1-25.0 ug/ml	5.1 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1970

Phosphate
14265-44-2
Ca-P
MW 90.97

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2780 Blood, serum			a) 18 b) 18 c) 32	a) Not given b) Not given c) Not given	a) 4.2 mg/dl b) 5.0 mg/dl c) 4.8 mg/dl	a) 3000 units of vitamin D2 in capsules weekly for 4 mo. Level at start of study b) 3000 units of vitamin D2 in capsules weekly for 4 mo. Level at end of study c) Vitamin-D-fortified flour for 6 mo. Level at end of study. Asians in Glasgow, 20 adults and 46 children from 14 families. Some subjects had biochemical abnormalities suggestive of rickets or osteomalacia. CALCIUM; METALS; BLOOD SERUM; VITAMIN D; ASIA; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; DIETS; COMPARATIVE EVALUATIONS; VITAMINS	Pietrek, J. Windo, J. Preece, M.A. O'Riordan, J.L.H. 1976
2781 Blood, serum		Colorimetry	1	a) 0.7-1.3 mg/100 ml b) 3.6-1.8 mg/100 ml c) 2.5-3.1 mg/100 ml	a) 1.0 mg/100 ml b) Not given c) Not given	a) Before oral Ca, PO4, & vitamin D therapy, on controlled Ca & PO4 intake 3 days b) Post 2nd infusion, 4.3g Ca IV during 15 days Observed progressive demineralization on oral therapy but increased bone density on IV. Teenage female with spastic quadriplegia, immobilized from infancy. IV Ca relieved symptoms of anticonvulsant-related rickets and osteoporosis. Oral Ca, vitamin D, and PO4 ineffective. IV Ca promoted remineralization of bones and reduced urine PO4. Oral Ca, vitamin D, and PO4 ineffective. CALCIUM; MINERAL METABOLISM; ANTICONVULSANTS; PENNSYLVANIA; URINE; BLOOD SERUM; DISEASES; VITAMIN D; HORMONES; DRUG THERAPY; BONE DISEASES; PHOSPHORUS	Latorre, H. Kenny, F.M. 1974
2782 Urine		Colorimetry	1	a) Not applicable b) Not applicable	a) 474 mg/24 hr b) 309 mg/24 hr	a) Before oral Ca, PO4, and vitamin D therapy, on controlled Ca and PO4 intake 3 days b) After 2nd infusion, 4.3g Ca IV during 15 days Teenage female with spastic quadriplegia, immobilized from infancy. IV Ca relieved symptoms of anticonvulsant-related rickets and osteoporosis. Oral Ca, vitamin D, and PO4 ineffective. IV Ca promoted remineralization of bones and reduced urine PO4. Oral Ca, vitamin D, and PO4 ineffective. CALCIUM; MINERAL METABOLISM; ANTICONVULSANTS; PENNSYLVANIA; URINE; BLOOD SERUM; DISEASES; VITAMIN D; HORMONES; DRUG THERAPY; BONE DISEASES; PHOSPHORUS; CASE HISTORIES	Latorre, H. Kenny, F.M. 1974

Phosphoric acid, diethyl ester
598-02-7
C4-H11-04-P
MW 154.10, BP 203.3 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2783 Blood	Ingestion Dermal	GC/MS	3	<0.05-0.32 ppm	Not given	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2784 Brain	Ingestion	GC/MS	1	Not applicable	0.150 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2785 Liver	Ingestion	GC/MS	2	<0.05-1.58 ppm	Not given	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2786 Urine	Ingestion	GC/MS	2	<0.05-24.5 ppm	Not given	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2787 Urine			a) 27 b) 18	a) 0.10-2.48 ppm b) 0.04-0.12 ppm	a) 0.89 ppm b) 0.06 ppm	a) Individuals exposed to Dasanit, Phorate, and Di-Syston b) Unexposed PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976
2788 Urine	Ingestion	GC	4	a) 0.04-0.14 mg/l b) 0.09-0.41 mg/l	a) 0.07 mg/l b) 0.17 mg/l	a) 1 mg/day ethyl parathion b) 2 mg/day ethyl parathion Total excreted per day was 0.16 mg for a) and 0.30 mg for b). PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Hetzler, M.L. Slach, E.F. Lin, L.L. 1977

Phosphoric acid, dimethyl ester
813-78-5
C2-H7-O4-P
MW 126.05, BP 172 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2789 Blood	Ingestion Dermal	GC/MS	3	< 0.05-38 ppm	Not given	Accidental pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Honeman, R.F. 1978
2790 Liver	Ingestion	GC/MS	1	Not applicable	60 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Honeman, R.F. 1978
2791 Urine		GC/MS	a) 1 b) 1	a) Not applicable b) Not applicable	a) 5 ppm b) 4.04 ppm	a) After ingesting dicrotophos b) After ingesting chlorpyrifos and malathion Accidental pesticide-ingestion patients. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Honeman, R.F. 1978
2792 Urine			a) 27 b) 18	a) <0.005-0.06 ppm b) <0.005-0.04 ppm	a) 0.017 ppm b) 0.015 ppm	a) Individuals exposed to Dasanit, Phorate, and Bi-Systox b) Unexposed PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976
2793 Urine	Ingestion	GC	4	a) 0.02-0.11 mg/l b) 0.05-0.23 mg/l	a) 0.06 mg/l b) 0.14 mg/l	a) 2 mg/day methyl parathion b) 4 mg/day methyl parathion Total excreted per day was 0.12 mg and 0.23 mg for 2 and 4 mg dose rates. PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Hetzler, M.L. Slach, E.F. Lin, L.L. 1977

Phosphoric acid, dimethyl ester, ester with 3-hydroxy-N-methylcrotonamide, (E)- (8 CI)
Phosphoric acid, dimethyl 1-methyl-3-(methylamino)-3-oxo-1-propenyl ester, (E)- (9 CI)
6923-22-4
C7-H14-N-O5-P
MW 223.16, MP 54-55 C, commercial 25-30 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2794 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 67.7% b) 14.7%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

Phosphorodithioic acid, O,O-diethyl ester, S-ester with 6-chloro-3-(mercaptomethyl)-2-benzoxazolinone (8 CI)
Phosphorodithioic acid, S-((6-chloro-2-oxo-3(2H)-benzoxazolyl)methyl) O,O-diethyl ester (9 CI)
2310-17-0
C12-H15-Cl-N-O4-P-S2
MW 367.80, MP 47.5-48 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2795 Urine		GC	2	a) 318-405 ng/ml b) 868-1274 ng/ml c) 311-739 ng/ml d) 476-1084 ng/ml	a) 355 ng/ml b) 1017 ng/ml c) 456 ng/ml d) 678 ng/ml	a) Worker 1, start of work day b) Worker 2, start of work day c) Worker 1, end of work day d) Worker 2, end of work day Values for K- salt of residue of phosalone, O,O-diethyl phosphorodithioate Peak excretion 4-5 hr after exposure. Workers in production of pesticides containing phosalone. Blood cholinesterase activity reduced 10-20% during exposure. PESTICIDE RESIDUES; YUGOSLAVIA; URINE; ORGANOPHOSPHATES; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS	Drevenkar, V. Frobe, Z. Vasilic, Z. Thalcevic, B. 1979

Phosphorodithioic acid, O,O-dimethyl ester, S-ester with 3-(mercaptomethyl)-1,2,3-benzotriazin-4(3H)-one (8 CI)
Phosphorodithioic acid, O,O-dimethyl S-[(4-oxo-1,2,3-benzotriazin-3(4H)-yl)methyl] ester (9 CI)
86-50-0
C10-H12-N3-O3-P-S2
MW 317.34, MP 73-74 C (crystals from methanol)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2796 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 69.5% b) 15.9%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

Phosphorodithioic acid, S-(((p-chlorophenyl)thio)methyl) O,O-diethyl ester (8 CI)
Phosphorodithioic acid, S-(((m-chlorophenyl)thio)methyl) O,O-diethyl ester (9 CI)
786-19-6
C11-H16-Cl-O2-P-S3
MW 342.85, BP 82 C at 0.01 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2797 Kidney	Ingestion	TLC GC-EC	1	Not applicable	1.45 ug/g	Fatal poisoning 78 yr-old man Pulmonary edema, congestion of abdominal viscera. PESTICIDES; LIVER; KIDNEYS; INSECTICIDES; AUTOPSIES	Coutselinis, A. Poulos, L. Kentarchou, P. Qannar, S. 1979
2798 Liver	Ingestion	TLC GC-EC	1	Not applicable	1.28 ug/g	Fatal poisoning 78 yr-old man Pulmonary edema, congestion of abdominal viscera. PESTICIDES; LIVER; KIDNEYS; INSECTICIDES; AUTOPSIES	Coutselinis, A. Poulos, L. Kentarchou, P. Qannar, S. 1979

Phosphorodithioic acid, S,S'-methylene O,O,O',O'-tetraethyl ester
563-12-2
C9-H22-O4-P2-S4
MW 384.48, MF -12 to -13 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2709 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 39.4% b) 3.3%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

Phosphorothioic acid, O-(2,4-dichlorophenyl) O,O-diethyl ester
97-17-6
C10-H13-Cl2-O3-P-S
MW 315.17, BP 164-169 C at 0.1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2800 Adipose	Ingestion	GC-EC	3	a) Not applicable b) Not applicable c) 67-0.63 ppm	a) 174 ppm b) 36 ppm c) Not applicable	a) 76-yr-old male at autopsy about 3 days after an unknown dose b) 52-yr-old female 30 days after 14.2 g of 75% dichlofenthion c) Changes, shown by biopsy, in 62-yr-old male 4-54 days after 170.1 g 75% dichlofenthion Partition coefficient data presented. Suicidal ingestions. Mild onset and latent phase (to 48 hr) followed by severe and life-threatening cholinergic crises that ended fatally or required prolonged antidotal therapy. Delayed onset of respiratory insufficiency, hypotension, arrhythmias & other cholinergic effects. Bleeding from GI tract, hypokalemia. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, R.E. Vaclavek, C. 1975
2801 Blood	Ingestion	GC-EC	3	a) Not applicable b) 173-2.2 ppb c) 660-1.7 ppb	a) 19.0 ppm b) Not applicable c) Not applicable	a) Serum of a 74-yr-old male at autopsy 52.5 hr after 170.1 g of 75% dichlofenthion b) Change in serum of a 52-yr-old female 14-75 days after 14.2 g of 75% dichlofenthion c) Whole blood levels in 62-yr-old male 1-88 days after 170.1 g of 75% dichlofenthion. Serum levels were about twice blood levels. Suicidal ingestions. Mild onset and latent phase (to 48 hr) followed by severe and life-threatening cholinergic crises that ended fatally or required prolonged antidotal therapy. Delayed onset of respiratory insufficiency, hypotension, arrhythmias & other cholinergic effects. Bleeding from GI tract, hypokalemia. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, R.E. Vaclavek, C. 1975

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Phosphorothioic acid, O-(2,4-dichlorophenyl) O,O-diethyl ester
97-17-6
C10-H13-Cl2-O3-P-S
MW 315.17, MP 164-169 C at 0.1 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2802 Gall bladder	Ingestion		1	Not applicable	37 ppm	76-yr-old male at autopsy about 3 days after ingesting an unknown dose. Suicidal ingestion. Mild onset and latent phase (to 48 hr) followed by severe and life-threatening cholinergic crises that ended fatally or required prolonged antidotal therapy. Delayed onset of respiratory insufficiency, & other cholinergic effects. Hypokalemia, abnormal white cell count & blood glucose. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, H.E. Vaclavek, C. 1975
2803 Kidney	Ingestion		2	a) Not applicable b) Not applicable	a) 0.83 ppm b) 1.3 ppm	a) 79-yr-old male at autopsy, 52.5 hr after 170.1 g of 75% dichlofenthion b) 76-yr-old male at autopsy about 3 days after ingestion of an unknown dose Suicidal ingestions. Mild onset and latent phase (to 48 hr) followed by severe and life-threatening cholinergic crises that ended fatally or required prolonged antidotal therapy. Delayed onset of respiratory insufficiency, hypotension, arrhythmias & other cholinergic effects. Bleeding from GI tract, hypokalemia. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, H.E. Vaclavek, C. 1975

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Phosphorothioic acid, O-(2,4-dichlorophenyl) O,O-diethyl ester
97-17-6
C10-H13-C12-O3-P-S
MW 315.17, BP 164-169 C at 0.1 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2804 Liver	Ingestion		1	Not applicable	4 ppm	76-yr-old male at autopsy about 3 days after ingesting an unknown dose. Suicidal ingestion. Mild onset and latent phase (to 48 hr) followed by severe and life-threatening cholinergic crises that ended fatally or required prolonged antidotal therapy. Delayed onset of respiratory insufficiency, & other cholinergic effects. Hypokalemia, abnormal white cell count & blood glucose. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, R.E. Vaclavek, C. 1975

Phosphorothioic acid, O,O-diethyl ester
2465-65-8
C4-H11-O3-P-S
MW 170

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2805 Blood	Ingestion Dermal	GC/MS	3	<0.1-0.46 ppm	Not given	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2806 Urine	Ingestion		1	Not applicable	23.6 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2807 Urine			a) 27 b) 14	a) ND - 2.52 ppm b) Not applicable	a) 0.46 ppm b) Not applicable	a) Individuals exposed to Dasanit, Thorate, and Di-Syston b) Unexposed PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976
2808 Urine	Ingestion	GC	4	a) 0.01-0.07 mg/l b) 0.03-0.11 mg/l	a) 0.03 mg/l b) 0.07 mg/l	a) 1 mg/day ethyl parathion b) 2 mg/day ethyl parathion Total excreted per day was 0.06 mg in a) and 0.12 mg in b). PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Metzler, M.L. Slach, E.F. Lin, L.L. 1977

Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester (8 CI)
Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester (9 CI)
56-38-2
C10-H14-N-O5-P-S
MW 291.27, MP 6 C, BP 375 C at 760 mm Hg, 157-162 C at 0.6 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2809 Blood	Dermal	GC/MS	1	Not applicable	0.034 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2810 Blood, plasma	Ingestion	GC	1	Not applicable	2.6 mg/l	Level 16 hr after ingestion of unknown amount of Gramoxone 54 yr old suicide victim. Subject became anuric, hypotensive Death due to cardiac failure 40 hr after ingestion of herbicide. PESTICIDES; CASE HISTORIES; MEASUREMENT METHODS	van Dijk, A. Ebberink, R. de Groot, G. Maes, R.A.A. Douze, J.H.C. van Heyst , A.N.P. 1977
2811 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 45.8% b) 9.7%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974
2812 Urine	Ingestion	GC-EC	4	a) Not given b) Not given c) Not given	a) 29% b) 29% c) 10%	a) Paranitrophenol b) Diethylphosphate (metabolite) c) Diethylthiophosphate (metabolite) % recovery in 24 hr after a 2g or 4g dose. PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Hetzler, H.L. Slach, E.F. Lin, L.L. 1977

Phosphorothioic acid, O,O-diethyl O-(3,5,6-trichloro-2-pyridyl) ester (8 CI)
Phosphorothioic acid, O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) ester (9 CI)
2921-88-2
C9-H11-Cl3-N-O3-P-S
MW 350.57, MF 81-82 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2913 Blood	Ingestion	GC/MS	1	Not applicable	0.219 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Roseman, R.F. 1978
2914 Brain	Ingestion	GC/MS	1	Not applicable	0.87 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Roseman, R.F. 1978
2915 Liver	Ingestion	GC/MS	1	Not applicable	0.88 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Loren, E.M. Bradway, D.E. Roseman, R.F. 1978

Phosphorothioic acid, O,O-diethyl, O-(2-isopropyl-6-methyl-4-pyrimidinyl ester (8 CI)
Phosphorothioic acid, O,O-diethyl O-(6-methyl-2-(1-methylethyl)-4-pyrimidinyl) ester (9 CI)
333-41-5
C12-H21-N2-O3-P-S
MW 304.36, MP decomp above 120 C, BP 83-84 C at 0.002 mm Hg, VP 6.1X10(E-6) at 20 C, 1.1X10(E-3) at 40 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2516 Blood			1	Not applicable	8 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977

Phosphorothioic acid, O,O-dimethyl ester
1112-38-5
CJ-97-03-9-5
MW 234

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2817 Blood	Ingestion Dermal	GC/MS	3	<0.1-0.13 ppm	Not given	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2818 Urine	Ingestion	GC/MS	1	Not applicable	7.86 ppm	Pesticide poisoning. PESTICIDES; URINE; ORGANOPHOSPHATES; BLOOD; LIVER; BRAIN; PHENOLS; CASE HISTORIES; NORTH CAROLINA	Lores, E.M. Bradway, D.E. Moseman, R.F. 1978
2819 Urine			a) 16 b) 3 c) 2	a) <0.008-9.70 ppm b) <0.008-0.28 ppm c) <0.008-2.68 ppm	a) 0.87-5.88 ppm b) 0.02-0.06 ppm c) 0.01-0.70 ppm Range of means.	a) Tree thinners b) Foreman c) Irrigators Levels taken daily for 5 days. Recovery of estimated dose 29.5-68%. Adult male Mexican-American farm laborers (age 21-63 yr) working in California peach orchard treated with Guthion. Decrease in blood cholinesterase activity but no clinical signs of organophosphate toxicity. PESTICIDES; ORGANOPHOSPHATES; OCCUPATIONAL HAZARDS; URINE	Kraus, J.F. Richards, D.M. Borhani, N.O. Hull, T. Kilgore, W.W. Winterlin, W. 1977
2820 Urine			a) 27 b) 14	a) 0.02-3.22 ppm b) 0.02-0.11 ppm	a) 0.09 ppm b) 0.07 ppm	a) Individuals exposed to Damanit, Sborate, and Di-Syston b) Unexposed PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976

Phosphorothioic acid, O,O-dimethyl O-(p-nitrophenyl) ester (8 CI)
Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester (9 CI)
298-00-0
C8-H10-N-O5-P-S
MW 263.23, MP 37-38 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2821 Blood	Ingestion		3	a) 33-480 ug/dl b) 5.3-80 ug/dl	a) 271 ug/dl b) 31.4 ug/dl	a) Overdoses, before treatment b) Overdoses, after plasma perfusion through charcoal Methyl parathion ingested as methaphos. 3 men, ages 70, 17 and 25 yr. 1 patient died of acute heart-lung insufficiency with massive bilateral pneumonia, 2 patients recovered. DRUGS; BLOOD; CASE HISTORIES	Luzhnikov, E.A. Yaroslavsky, A.A. Molodenkov, M.N. Sharkalin, B.K. Evseev, N.G. Barsukov, U.F. 1977
2822 Urine	Ingestion	GC-EC	4	a) Not given b) Not given	a) 27% b) 12%	a) Paranitrophenol b) Dimethylphosphate (metabolite) % recovery in 24 hr after a 1g or 2g dose. PESTICIDES; ORGANOPHOSPHATES; URINE; METABOLITES; IOWA; PHENOLS	Morgan, D.P. Hetzler, H.L. Slach, E.F. Lin, L.L. 1977

Phosphorus
7723-14-0
P
At# 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2823 Blood, serum			39	2.5 mg/dl - Normal	Not given	Normal range is 2.8-4.5 mg/dl. Adult epileptic patients attending neurology outpatient clinics of Toronto General and Toronto Western Hospitals. 22 men and 16 women, mean age 45 yr (range 26-72 yr). Hypophosphatemia in 4 of 39 patients. CALCIUM; METABOLISM; CHEMOTHERAPY; PHOSPHORUS; ENZYMES; MINERALS; HYDROXYCHOLECALCIFEROLS; BLOOD SERUM; CENTRAL NERVOUS SYSTEM DISEASES; CANADA	Pylypchuk, G. Creopoulos, D.G. Wilson, D.R. Harrison, J.E. McNeill, K.G. Meema, H.E. Ogilvie, B. Sturtridge, W.C. Murray, T.M. 1978
2824 Blood, serum			a) 9 b) 2	a) 3.0-3.3 mg/dl b) 5.4-8.0 mg/dl	a) 3.1 mg/dl b) 6.5 mg/dl	a) Controls b) Patients with hypoparathyroidism CALCIUM; PHOSPHORUS; METALS; METABOLITES; BLOOD SERUM; URINE; HYDROXYCHOLECALCIFEROLS; VITAMIN D; UNITED KINGDOM; VITAMINS	Mawer, E.B. Davies, M. Backhouse, J. Hill, L.F. Taylor, C.M. 1976
2825 Kidney		ES	a) 132 b) 73 c) 87	a) Not given b) Not given c) Not given	a) 7500 ppm b) 7520 ppm c) 7580 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
2826 Liver		ES	a) 91 b) 44 c) 76	a) Not given b) Not given c) Not given	a) 9400 ppm b) 10,800 ppm c) 9,980 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978

(NEXT PAGE)

Phosphorus
7723-14-0
P
AtW 30.97376, MP 44.1 C, BP 280 C, VP 10 mm Hg at 127 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2827 Spleen		ES	a) 91 b) 40 c) 76	a) Not given b) Not given c) Not given	a) 10,500 ppm b) 12,700 ppm c) 11,300 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
2828 Urine			a) 4 b) 3	a) 761-1006 mg/day b) 463-663 mg/day	a) 888 mg/day b) 591 mg/day	a) Controls, 32-36 wk pregnant, identical diets b) 32-36 wk pregnant, 1 g/day extra calcium 7 primaparas, aged 16-19 yr CALCIUM; MAGNESIUM; PHOSPHORUS; METALS; URINE; PREGNANCY; DIETS; AUSTRALIA; COMPARATIVE EVALUATIONS	Duggin, G.G. Lyneham, B.C. Dale, M.F. Evans, B.A. Tiller, D.J. 1978
2829 Urine		AAS	12	a) Not given b) Not given	a) 0.883 + or - 0.058 g/day b) 0.686 + or - 0.039 g/day	a) Low fiber diet b) High fiber diet Men 37 to 58 yr old. Mean daily balance +0.361 g on low-fiber diet and +0.292 g on high-fiber diet. ADULTS; URINE; METALS; TRACE ELEMENTS; DIETS; FIBERS	Kelsay, J.L. Jacob, R.A. Prather, E.S. 1979

Phthalazine, 1-hydrazino- (8 CI)
1(2H)-Phthalazinone, hydrazone (9 CI)
86-54-4
C8-H8-N4
MW 160.18, MP 172-173 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2930 Blood, plasma	Ingestion	HPLC GC	1	a) 0.23-3.05 uM b) 1.5-0.30 uM c) 2.60-5.25 uM	a) Not applicable b) Not applicable c) Not applicable	a) Hydralazine, 20 and 50 min b) Hydralazine plus metabolites, 25 and 200 min. 1.5 uM at 30 min c) Hydralazine pyruvic acid hydrazone, 25 and 375 min Dose, 5 umoles/kg, oral, to fast acetylator. Similar data for IV doses. Subject drug-free for 2 wk before study, and without cardiovascular disease. Fasted before and after dose. DRUGS; BLOOD PLASMA; ADULTS; HYPERTENSION; COMPARATIVE EVALUATIONS; METABOLISM; METABOLITES; URINE	Shepherd, A.M.M. Ludden, T.M. Maegele, K.D. Talseth, T. McNay, J.L. 1979
2931 Urine	Injection	HPLC	8	3.10-8.20 % of dose	5.43 % of dose	Measured hydralazine pyruvic acid hydrazone after 1.5 umoles/kg IV 26-36 yr old males, drug-free for 2 wk before study, and without cardiovascular disease. Fasted before and after dose. DRUGS; BLOOD PLASMA; ADULTS; HYPERTENSION; COMPARATIVE EVALUATIONS; METABOLISM; METABOLITES; URINE	Shepherd, A.M.M. Ludden, T.M. Maegele, K.D. Talseth, T. McNay, J.L. 1979

Phthalic acid, bis(2-ethylhexyl) ester (9 CI)
1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (9 CI)
117-81-7
C24-H38-O4
MW 390.56

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2832 Adipose		GC-EC	3	a) 0.90-1.37 ug/g wet wt b) 0.29-1.15 ug/g wet wt c) 0.35-1.29 ug/g wet wt	a) 1.15 ug/g wet wt b) 0.68 ug/g wet wt c) 0.65 ug/g wet wt	a) Sample 1 b) Sample 2 c) Sample 3 Nine different solvents tested. Tissue collected during autopsies on accident victims. CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; COMPARATIVE EVALUATIONS; AUTOPSIES; PESTICIDES; DDT; PHTHALIC ACIDS; POLYCHLORINATED BIPHENYLS	Mes, J. Campbell, D.S. 1976
2833 Blood		GC-EC	a) 9 b) 13	a) 0-0.02 ppm b) 0.05-0.20 ppm	a) 0.01 ppm b) 0.13 ppm	a) Before meals b) After meals Healthy Japanese PHTHALIC ACIDS; BLOOD; FOODS; ORGANIC CHLORINE COMPOUNDS; JAPAN; POLYCHLORINATED BIPHENYLS	Tomita, I. Nakamura, T. Yagi, Y. 1977

Phthalic acid, dibutyl ester (9 CI)
1,2-Benzenedicarboxylic acid, dibutyl ester (9 CI)
84-74-2
C16-H22-O4
MW 278.34, MP 340 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2838 Blood		GC-EC	a) 9 b) 13	a) 0-0.06 ppm b) 0.03-0.19 ppm	a) 0.02 ppm b) 0.10 ppm	a) Before meals b) After meals Healthy Japanese PHTHALIC ACIDS; BLOOD; FOODS; ORGANIC CHLORINE COMPOUNDS; JAPAN; POLYCHLORINATED BIPHENYLS	Tomita, I. Nakamura, Y. Yagi, Y. 1977

Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furoyl)- (8 CI)
Piperazine, 1-(4-amino-6,7-dimethoxy-2-quinazolinyl)-4-(2-furanylcarbonyl)- (9 CI)
19216-56-9
C19-H21-N5-O4
MW 382.42, MP 270-280 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2835 Blood, plasma	Ingestion	Fluorometry	24	a) 6.2-78.4 ng/ml b) 15.5-82.3 ng/ml c) 27.8-95.6 ng/ml	a) 35.9 ng/ml b) 39.1 ng/ml c) 58.2 ng/ml	a) Mean peaks, 0.5-24 hr after one 5-mg capsule. Peak time, 2.2 hr b) Mean peaks, 0.5-24 hr after 5 mg as 2- and 1-mg capsules. Peak time, 2.0 hr c) Mean peaks, 0.5-24 hr after 5 mg as solution. Peak time, 0.7 hr Healthy male volunteers. DRUGS; DRUG THERAPY; BLOOD PLASMA; COMPARATIVE EVALUATIONS; HYPERTENSION	Hobbs, D.C. Twomey, T.M. Pr'mer, R.F. 1978
2836 Blood, whole	Ingestion	HPLC-Fluorometry	a) 9 b) 9	a) 3.5-22.5 ng/ml b) 3.3-11.5 ng/ml	a) Not applicable b) Not applicable	a) Controls. Range of means 0.5 hr and 123 min after 5 mg. Final value, 4.7 ng/ml at 8 hr b) Patients. Range of means 0.5 hr and 132 min after 2 mg. Final value, 8.0 ng/ml at 8 hr Estimated from graph. Nine healthy male controls, ages 20-30 yr. 8 males, 1 female with chronic congestive heart failure, 36-70 yr old, on their usual medication and meals but in bed.	Jaillon, P. Pabin, P. Yee, Y.-G. Ball, P. Kates, R. Farrimon, D. Blanchke, T. 1979
						DRUGS; HEART DISEASES; CALIFORNIA; ADULTS; COMPARATIVE EVALUATIONS; BLOOD	

Piperidine, 1-(1-phenylcyclohexyl)-
77-10-1
C17-H25-N
MW 243.38, MP 46 C, BP 135-137 C at 1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2837 Blood	Ingestion Inhalation	GC	8	0.3-12.0 mg/l	2.39 mg/l	Phencyclidine related deaths, subjects aged 15-27 yr, from Orange County, CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Fagle, J.L. 1979
2838 Blood, plasma	Ingestion	GC	9	0.09-0.22 ug/ml	0.18 ug/ml	Overdose patients 18 yr old female, 26 yr old male, 20 yr old male. Some patients comatose, agitated, disoriented. DRUGS; BLOOD PLASMA; URINE; MEASUREMENT METHODS; CASE HISTORIES; BLOOD SERUM	Marshman, J.A. Ramsay, M.P. Sellers, E.M. 1976
2839 Brain	Ingestion Inhalation	GC	6	0.1-32.0 mg/kg	7.27 mg/kg	Phencyclidine related deaths, subjects, aged 15-27 yr, from Orange County, CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Fagle, J.L. 1979
2840 Kidney	Ingestion	GC	1	Not applicable	0.1 mg/kg	Phencyclidine related death, subject aged 19 yr, from Orange County, CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Fagle, J.L. 1979
2841 Liver	Ingestion Inhalation	GC	9	0.9-80.0 mg/kg	20.1 mg/kg	Phencyclidine related deaths, subjects aged 15-27 yr, from Orange County CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Fagle, J.L. 1979

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Piperidine, 1-(1-phenylcyclohexyl)-
77-10-1
C17-H25-N
MW 243.38, MP 46 C, BP 135-137 C at 1 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2842 Lung	Ingestion Inhalation	GC	3	0.4-7.6 mg/kg	2.97 mg/kg	Phencyclidine related deaths, subjects aged 15-27 yr, from Orange County, CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Bagle, J.L. 1979
2843 Urine	Ingestion	GC	2	2.3-6.5 mg/24 hr	4.4 mg/24 hr	Initial 24 hr urinary excretion in overdose patients with initial plasma concentrations of 0.19 and 0.09 ug/ml. Some patients comatose, agitated, disoriented. DRUGS; BLOOD PLASMA; URINE; MEASUREMENT METHODS; CASE HISTORIES; BLOOD SERUM	Marshman, J.A. Ramsay, H.P. Sellers, E.M. 1976
2844 Urine	Ingestion Inhalation	GC	5	0.4-48.6 mg/l	21.66 mg/l	Phencyclidine related deaths, subjects aged 15-27 yr, from Orange County, CA. Pulmonary edema, moderate to marked congestion of lungs and liver, and anoxic petechial hemorrhages in lungs of one case. DRUGS; BLOOD; BRAIN; KIDNEYS; LIVER; LUNGS; URINE; CASE HISTORIES; DRUG ABUSE; CALIFORNIA	Cravey, R.H. Reed, D. Bagle, J.L. 1979

Piperidinium, 1,1'-(3alpha,17beta-dihydroxy-5alpha-androstan-2beta,16beta-ylene)bis(1-methyl-, dibromide, diacetate (8 CI)
Piperidinium, 1,1'-((2beta,3alpha,5alpha,16beta, 17beta)-3,17-bis(acetyloxy)androstane-2,16-diyl)bis(1-methyl-, dibromide (9 CI)
15500-66-0
C35-H60-N2-O4.2Br
MW 732.70, MF 215 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2985 Blood, serum	Injection	Fluorometry	15	a) Not given b) Not given	a) 0.52 + or - 0.14 ug/ml b) 0.12 + or - 0.04 ug/ml	a) Maternal arterial, 13 + or - 4 min after 0.1 mg/kg IV b) Umbilical venous, 13 + or - 4 min after 0.1 mg/kg IV 15 patients undergoing cesarean section. DRUGS; DRUG THERAPY; PENNSYLVANIA; MEASUREMENT METHODS; STEROIDS; AMMONIUM COMPOUNDS; BLOOD SERUM; UMBILICAL CORD; HEALTH HAZARDS; COMPARATIVE EVALUATIONS	Wingard, L.B., Jr. Abouleish, E. West, D.C. Goehl, T.J. 1979

Polybrominated biphenyls (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2846 Adipose		GC	31	0.1-89.0 ppm	Not given	Michigan dairy farm residents from contaminated area in 1976. Adipose tissue levels 300 times higher than serum levels, and in equilibrium with them. ADIPOSE TISSUE; BLOOD SERUM; FOOD CONTAMINATION; MICHIGAN; POLYBROMINATED BIPHENYLS; WISCONSIN	Wolff, M.S. Anderson, H.A. Rosenman, K.D. Selikoff, I.J. 1979
2847 Blood, serum		GC	a) 163 b) 938	a) Nondetectable-0.3 ppb b) Nondetectable-0.3 ppb	a) Not given b) Not given	a) Wisconsin dairy farm residents. PBBs nondetectable in 127, at limit of detection (<0.2 ppb) in 28, and >0.3 ppb in 8 b) Michigan dairy farm residents. PBBs nondetectable in 7, at limit of detection (<0.2 ppb) in 29, and >0.3 ppb in 902. Wisconsin residents from noncontaminated area, Michigan residents from area contaminated by feed-mixing incident. ADIPOSE TISSUE; BLOOD SERUM; FOOD CONTAMINATION; MICHIGAN; POLYBROMINATED BIPHENYLS; WISCONSIN	Wolff, M.S. Anderson, H.A. Rosenman, K.D. Selikoff, I.J. 1979
2848 Blood, serum		GC	14	a) 1-1530 ppb b) 1-1363 ppb	a) 30 ppb b) 23 ppb	a) Workers in plant producing PBBs, 1976 levels b) Same workers, 1977 levels ADIPOSE TISSUE; BLOOD SERUM; FOOD CONTAMINATION; MICHIGAN; POLYBROMINATED BIPHENYLS; WISCONSIN	Wolff, M.S. Anderson, H.A. Rosenman, K.D. Selikoff, I.J. 1979
2849 Blood, serum		GC	31	<1-182 ppb	Not given	Michigan dairy farm residents from contaminated area in 1976. Serum values in equilibrium with adipose tissue values at 300 to 1, fat to serum. ADIPOSE TISSUE; BLOOD SERUM; FOOD CONTAMINATION; MICHIGAN; POLYBROMINATED BIPHENYLS; WISCONSIN	Wolff, M.S. Anderson, H.A. Rosenman, K.D. Selikoff, I.J. 1979
2850 Milk, fat	Ingestion		a) 53 b) 42	a) Not detected-1.2 ppm b) Not detected-0.5 ppm	a) Not given b) Not given	a) Lower peninsula-51/53 had detectable levels b) Upper peninsula-19/42 had detectable levels Residents of 2 distinct areas of Michigan, ages 14 to 45 yr, who gave birth during August 1976. BIPHENYL COMPOUNDS; BROMINE; MILK; MICHIGAN	Brilliant, L.B. Anburg, G.W. Tabister, J. Humphrey, H. Wilcox, K. Fyster, J. Bloomer, A.W. Price, H. 1979

Polychlorinated dibenzofurans (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2851 Adipose		CC GC/MS GC	a) 3 b) 2	a) 0.006-0.013 ppm b) Not detectable	a) 0.009 ppm (whole tissue) b) Not detectable	a) Yusho patients b) Controls Materials from autopsies. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
2852 Kidney		CC GC/MS GC	2	0.0002-0.0005 ppm (whole tissue)	0.0004 ppm (whole tissue)	Autopsy material from Yusho patients. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
2853 Liver	Ingestion	GC/MS	2	a) Not applicable b) 0.1-0.3 ng/g c) 1.2-4.5 ng/g d) 0.3-1.6 ng/g e) Not applicable f) 1.6-6.8 ng/g	a) < 0.02 ng/g b) 0.2 ng/g c) 2.8 ng/g d) 1.0 ng/g e) < 0.05 ng/g f) 4.0 ng/g	a) Trichlorodibenzofuran b) Tetrachlorodibenzofuran c) Pentachlorodibenzofuran d) Hexachlorodibenzofuran e) Heptachlorodibenzofuran f) Total polychlorinated dibenzofurans Deceased Yusho patients, 17 and 25 yr. POLYCHLORINATED BIPHENYLS; CHLORINATED HYDROCARBONS; LIVER; JAPAN; FOOD CONTAMINATION; DISEASES; RICE; OILSEED CROPS	Pappo, C. Puser, H.P. Kuroki, H. Masuda, Y. 1979
2854 Liver		CC GC/MS GC	a) 3 b) 2	a) 0.003-0.025 ppm (whole tissue) b) Not detectable	a) 0.013 ppm (whole tissue) b) Not detectable	a) Yusho patients b) Controls Material from autopsies. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
2855 Lung		CC GC/MS GC	1	Not applicable	Trace (0.00005-0.0001 ppm)	Autopsy material from Yusho patient. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977
2856 Spleen		CC GC/MS GC	2	<0.00005-0.0001 ppm	Not given	Autopsy material from Yusho patients. BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; RICE; OILSEED CROPS; FOOD CONTAMINATION; DISEASES; AUTOPSIES; BIOACCUMULATION; POLYCHLORINATED BIPHENYLS; ADIPOSE TISSUE; KIDNEYS; LUNGS; SPLEEN; LIVER; JAPAN	Nagayama, J. Masuda, Y. Kuratsune, M. 1977

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2857 Adipose		X-ray spectros	4	Not given	352 ppm dry wt	Adbominal fat. 2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Rangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2858 Aorta		X-ray spectros	9	Not given	3494 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Rangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2859 Blood, plasma	Injection		a) 16 b) 4	a) 3.7-4.3 mmol/l b) 2.6-4.9 mmol/l	a) 4.02 mmol/l b) 3.86 mmol/l	a) Normokalemic patients, treated with digoxin, furosemide, and potassium b) Hypokalemic patients, treated with digoxin, furosemide, hydrochlorothiazide, and potassium. Patients receiving daily treatment in Copenhagen, Denmark hospital. Normokalemic patients (age 29-68 yr) with chronic congestive heart failure due to stenosis and mitral insufficiency. Hypokalemic patients with congestive heart failure. Moderate hypokalemia reduced the active tubular secretion of digoxin, thus increasing its half-life. DRUGS; POTASSIUM; BLOOD PLASMA; ADULTS; HEART DISEASES; DENMARK	Steinessa, E. 1978
2860 Blood, serum		AAS	187	a) Not given b) Not given	a) 20.8 mg/100 ml b) 20.8 mg/100 ml	a) Men b) Women Criteria for low levels < 13.1 mg/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978
2861 Blood, serum			12 of 14	3.4-5.2 mEq/l	4.65 mEq/l	Patients on maintenance doses from 0.125-0.25 mg/day 11 males, 3 females aged 57-88 yr scheduled to undergo urologic surgical procedures DRUGS; METALS; POTASSIUM; BLOOD SERUM; SPINAL FLUID; DRUG THERAPY	Gaves, J.M. Greenblatt, D.J. Lloyd, B.L. Harmatz, J.S. Smith, T.W. 1978

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Potassium
7440-09-7
K
Atw 39.098, MP 62.2 C, BP 765.5 C, BP 100 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2862 Blood, serum			1	Not applicable	6.3 meq/l	Ca admission 5-6 hr after 19 mg digoxin 81-yr-old woman, ingested 19 mg, University Hospital, San Diego, CA. DRUGS; DRUG ABUSE; BLOOD SERUM; CALIFORNIA; MINERAL METABOLISM; POTASSIUM	Warren, S.F. Fanestil, D.D. 1979
2863 Body		Radiometry	10	a) 3756-3775 meoles b) 3733-3342 meoles	a) 2739 meoles b) 2553 meoles	a) Preoperative total-body K b) Postoperative total-body K Preoperative levels within normal range. Patients undergoing heart valve replacement, without cardiac cachexia before operation. POTASSIUM; METALS; MINERAL METABOLISM; METABOLISM; UNITED KINGDOM; BODY	Waleaby, D.K. Goode, A.W. Bentall, H.H. 1978
2864 Hair		NA	11	1995-2370 ppm	2155 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkins, A.K. Velandia, J.A. Dienes, T. 1977
2865 Kidney		X-ray spectros	12	a) Not given b) Not given	a) 9228 ppm dry wt b) 9872 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses on each sample. 157a autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Rangelson, N.F. Hill, M.W. Nielson, E.E. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2866 Kidney		ES	a) 137 b) 74 c) 90	a) Not given b) Not given c) Not given	a) 7230 ppm b) 7120 ppm c) 6750 ppm	a) No renal disease b) Acute renal failure c) Chronic renal failure Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

(NEXT PAGE)

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2867 Liver		X-ray spectros	10	Not given	9003 ppm dry wt	2 samples taken per case. 2 analyses run on each sample. 1974 autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2868 Liver		ES	a) 92 b) 40 c) 76	a) Not given b) Not given c) Not given	a) 7860 ppm b) 7980 ppm c) 9350 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2869 Pancreas		X-ray spectros	4	Not given	8735 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2870 Spleen		X-ray spectros	8	Not given	12558 ppm dry wt	2 samples per case. 2 analyses on each sample. 1974 autopsies of 10 Pima Indians, a Papago Indian, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2871 Spleen		ES	a) 92 b) 40 c) 76	a) Not given b) Not given c) Not given	a) 11,600 ppm b) 10,000 ppm c) 10,000 ppm	a) No renal disease b) Acute renal diseases c) Chronic renal diseases a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974

(NEXT PAGE)

Potassium
7440-09-7
K
AtW 39.098, MP 63.2 C, BP 765.5 C, VP 100 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2872 Teeth		Radiometry	291 teeth	a) Not given b) Not given c) Not given	a) 0.018% of ash b) 0.021% of ash c) 0.020% of ash	a) Deciduous b) 22-28 yr c) >34 yr Pooled samples, average 7 teeth per sample. Other data available. Teeth from people living in Lower Silesia in southwestern Poland. STRONTIUM; CALCIUM; CESIUM; POTASSIUM; RADIOISOTOPES; METALS; TEETH; POLAND	Glowiak, B.J. Pacyna, J. Palczynski, R.J. 1977
2873 Urine		NA	a) 1 b) 1	a) 2.27-8.20 g/24 hr b) 1.78-3.15 g/24 hr	a) 3.02 g/24 hr b) 2.46 g/24 hr	a) Healthy male, 5 determinations over 4 mo b) Healthy female, 2 determinations 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Pregna-1,4-diene-3,11,20-trione, 17,21-dihydroxy-
53-03-2
C21-H26-O5
358.44, MP 235 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2874 Blood, plasma			6	20-70 ug/dl	Not given	Range of peaks, estimated doses of 5-50 mg. Healthy males, aged 27 + or - 3 yr. DRUGS; ADULTS; BLOOD PLASMA; METABOLITES; NEW YORK; STEROIDS; HORMONES; DRUG THERAPY; CORTICOSTEROIDS; GLUCOCORTICOIDS	Rose, J.Q. Jusko, W.J. Nickelsen, J.A. 1979

Pregna-1,4-diene-3,20-dione, 11beta,17,21-trihydroxy- (8 CI)
Pregna-1,4-diene-3,20-dione, 11,17,21-trihydroxy-, (11beta)- (9 CI)
50-24-8
C21-H28-O5
MW 360.44, MP 240-241 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2875 Blood, plasma	Ingestion		6	120-610 ng/dl	Not given	Range of peaks, estimated from graph for doses from 5-50 mg Saturating, non-linear effect of dose on peaks. Healthy males, aged 27 + or - 3 yr. CROSS; ADULTS; BLOOD PLASMA; METABOLITES; NEW YORK; STEROIDS; HORMONES; DRUG THERAPY; CORTICOSTEROIDS; GLUCOCORTICOIDS	Rose, J.Q. Jusko, W.J. Nickelsen, J.A. 1979

Pregna-1,4-diene-3,20-dione, 11beta,17,21-trihydroxy-6alpha-methyl-, 21-acetate (8 CI)
Pregna-1,4-diene-3,20-dione, 21-(acetyloxy)-11,17-dihydroxy-6-methyl-, (6alpha,11beta)- (9 CI)
53-36-1
C24-H32-O6
MW 416.52, MF 205-208 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2876 Blood, plasma	Ingestion Rectal	HPLC	12	a) Not given b) Not given c) Not given	a) 153 ng/ml b) 178 ng/ml c) 22 ng/ml	a) Mean peak after 10 ml of 3.60 mg/ml oral methylprednisolone. Mean peak at 3 hr b) Mean peak after 10 ml of 4 mg/ml oral methylprednisolone acetate. Mean peak at 3 hr c) Mean peak after 40 mg 3H-labelled methylprednisolone acetate as retention enema. Mean peak 4 hr. Normal subjects, ages 22-44 yr, on no medication or alcohol for 7 days before study, fasted before and after dose. DRUGS; GLUCOCORTICOIDS; BLOOD PLASMA; URINE; FECES; COMPARATIVE EVALUATIONS	Garg, D.C. Wagner, J.G. Sakmar, E. Weidler, D.J. Albert, K.S. 1979
2877 Urine	Rectal	Radiometry	12	4.52-58.9% of dose	34.3% of dose (median)	5-day cumulative excretions after 40-mg dose of 3H-labelled drug as retention enema. Percent inversely related to time of 1st bowel movement after dose. Normal subjects, ages 22-44 yr, on no medication or alcohol for 7 days before study, fasted before and after dose. DRUGS; GLUCOCORTICOIDS; BLOOD PLASMA; URINE; FECES; COMPARATIVE EVALUATIONS	Garg, D.C. Wagner, J.G. Sakmar, E. Weidler, D.J. Albert, K.S. 1979

Pregna-1,4,6-triene-3,20-dione, 6-chloro-11beta,17,21-trihydroxy- (9 CI)
Pregna-1,4,6-triene-3,20-dione, 6-chloro-11,17,21-trihydroxy-, (11beta)- (9 CI)
5251-34-3
C21-H25-Cl-O5
MW 392.91

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2979 Blood, plasma	Ingestion Injection	GC/MS	a) 4 b) 4 c) 4 d) 4 e) 2 f) 2	a) 2.75-81.3 ng/ml b) 1.85-87.0 ng/ml c) 2.13-88.9 ng/ml d) 3.24-88.2 ng/ml e) 1.7-30.5 ng/ml f) 1.8-50.5 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 2.50-mg dose in capsule with starch and lactose b) 2.50-mg dose in capsule with starch, lactose and magnesium stearate c) 2.50-mg dose in tablet with starch, lactose, povidone and magnesium stearate d) 2.50 mg orally in 100 ml of 15% ethanol-10% citric acid buffer e) 2.0-mg oral dose in normal saline-ethanol (9:1) f) 2.0-mg IV dose in normal saline-ethanol (9:1) Peak levels after oral doses occurred in 30-57.7 min. Normal adults (mean age 31.9 yr, mean weight 78.2 kg). DRUGS; CORTICOSTEROIDS; GLUCOCORTICOIDS; BLOOD PLASMA; ANTI-INFLAMMATORY AGENTS; ANALGESICS	Mroszczak, E.J. Funkel, R. Strand, L.J. Tomlinson, R.V. Fratis, A. Segre, E. 1978

Prolactin (VAN)
9002-62-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED
MW About 23,000

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2879 Blood, plasma		RIA	14	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 13.2 + or - 1.3 ng/ml b) 48.4 + or - 11.7 ng/ml c) 112.9 + or - 26.6 ng/ml d) 33.7 + or - 7.2 ng/ml e) 89.2 + or - 3.7 ng/ml	a) Base levels after washout. Levels in females slightly higher (14.4 vs 11.8 ng/ml) b) Males, mean peak 2-24 hr after 40 mg oral butaperazine c) Females, mean peak 2-24 hr after 40 mg oral butaperazine d) Males, 2 x 40 mg/day butaperazine 1-2 wk e) Females, 2 x 40 mg/day butaperazine 1-2 wk Prolactin levels not correlated with plasma or RBC butaperazine. Chronic schizophrenics DRUGS; DRUG THERAPY; BLOOD PLASMA; ERYTHROCYTES; HORMONES; NERVOUS SYSTEM DISEASES; SEX; ADULTS	Smith, R.C. Tamminga, C.A. Crayton, J.W. Dekirmenjian, H. Davis, J.M. 1979
2880 Blood, plasma	Ingestion	RIA	13	10-180 ng/ml	Not applicable	Means before to 4 wk after 800 mg/day sulpiride. Maximal effect after 1 wk. After 4 wk, plasma and CSF levels correlated, r=0.80, P<0.025. Marked individual variation. Psychotic women with thought disorders, delusions, and auditory hallucinations. No organic brain disorder, somatic disease, alcoholism or drug abuse. Ages 33 to 65 yr. Side Effects included: mild extrapyramidal effects, tension in breasts, somnolence. Reduction in 2 psychopathological rating parameters within 10 days. DRUGS; DRUG THERAPY; NERVOUS SYSTEM DISEASES; SWEDEN; BLOOD PLASMA; SPINAL FLUID; HORMONES; NEUROLOGIC MANIFESTATIONS; ADULTS	Bjerkenstedt, L. Hagnryd, C. Sedvall, G. 1979

Proline, 4-hydroxy-, L- (8 CI)
L-Proline, 4-hydroxy-, trans- (9 CI)
51-35-4
C5-H9-N-O3
MW 131.13, MP alpha form 274 C, beta form 239-241 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2881 Lung		Colorimetry	a) 19 b) 15	a) 17.9-29.7 mg/g dry wt b) 17.3-30.0 mg/g dry wt	a) 23.3 mg/g dry wt b) 23.4 mg/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1978

Propanamide, 2-amino-N-(2,6-dimethylphenyl)-
41708-72-9
C11-H16-N2-O
MW 192.26

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2982 Blood	Injection		a) 6 b) 5 c) 6 d) 5	a) Not given b) Not given c) Not given d) Not given	a) 11.7 ug/ml b) 18.7 ug/ml c) 4.6 ug/ml d) 7.77 ug/ml	a) After infusion at 0.50 mg/kg/min b) After infusion at 0.75 mg/kg/min c) 15 min after infusion at 0.50 mg/kg/min d) 15 min after end of infusion at 0.75 mg/kg/min. Peaks occured at end of infusion. Subjects, 32-63 yr old, had undergone diagnostic cardiac catheterization. DRUGS; BLOOD; HEART DISEASES; ADULTS; COMPARATIVE EVALUATIONS	Schwartz, M. Covino, B. Duce, B. Narang, R. Fiore, J. Markelis, M. Mizui, S. Smith, E. 1979
2983 Blood, plasma	Injection	CC Colorimetry	a) 4 b) 6	a) 13-3.6 umoles/l b) 2.8-0.5 umoles/l	a) Not applicable b) Not applicable	a) Patients, 0.5 and 24 hr after 33 umoles/kg IV over 15 min b) Healthy subjects, 0 and 24 hr after 6 umoles/kg IV over 20 min Data also given for single and repeated oral doses. Healthy males, average age 23 yr. Patients with acute myocardial infarction, ages 51-75 yr. Decrease in ventricular tachyarrhythmias in most patients. DRUGS; DRUG THERAPY; HEART DISEASES; ADULTS; BLOOD PLASMA; SWEDEN	Graffner, C. Conradson, T-B. Hofvendahl, S. Eyden, L. 1980
2984 Blood, plasma	Ingestion	HPLC	1	a) 2.45-0.075 ug/ml b) 5.40-0.16 ug/ml	a) Not applicable b) Not applicable	a) 30 min-60 hr after 400-mg dose b) 30 min-60 hr after 800-mg dose 12-hr fast preceded each dose. Estimated from graph. 60 yr old, 67 kg patient. DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Meffin, P.J. Harapat, S.R. Harrison, D.C. 1977
2985 Urine	Ingestion	GC GC-EC HPLC	6	a) 28-55% of daily dose b) 16-31% of daily dose c) 15-30% of daily dose	a) 42.8% of daily dose b) 23.3% of daily dose c) 23% of daily dose	a) Excreted unchanged b) Released by acid hydrolysis c) Released by glucuronidase (patients only) 24-hr cumulative recovery of tocainide after multiple or single doses of 300-3200 mg/day. Typical urine levels of free tocainide were 200-600 ug/ml. Patients, ages 40-60, long-term treatment with tocainide HCl, and a male control. DRUGS; ANTIARRHYTHMIC AGENTS; METABOLISM; URINE	Flvin, A.T. Keenaghan, J.B. Pyrnes, E.W. Tenthorey, P.A. McMaster, P.D. Takman, B.H. Talka, D. Manion, C.V. Baer, D.T. Wolshin, F.M. Meyer, M.B. Ronfeld, R.A. 1980

Pseudoephedrine, (+)- (9 CI)
Benzenemethanol, alpha-(1-(methylamino)ethyl)-, (S-(R*,R*))- (9 CI)
90-82-4
C10-H15-N-O
MW 165.23, MP 119 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2986 Blood		GC	1	Not applicable	11 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
2987 Liver		GC	1	Not applicable	11 ug/g	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
2988 Urine	Ingestion	HPLC	4	116-104 mg	110 mg	14-hr urines. Range corresponds to urine pH range 5.31-5.95, after 8 mg chlorpheniramine maleate and 120 mg pseudoephedrine HCl with or without NH4Cl. Other data available. Healthy, nonobese subjects on no other drugs, enzyme-inducing agents, monoamine oxidase inhibitors for 1 month, no caffeine or alcohol during study. DRUGS; MEASUREMENT METHODS; CRIME; METABOLITES; METABOLISM	Lai, C.M. Stoll, R.G. Took, Z.M. Yacobi, A. 1979

Pyridine, 2-(p-bromo-alpha-(2-(dimethylamino)ethyl)benzyl)- (8 CI)
2-Pyridinepropanamine, gamma-(4-bromophenyl)-N,N-dimethyl- (9 CI)
86-22-6
C16-H19-Br-N2
MW 319.3, BP 147-152 C at 0.5 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2889 Blood		GC	1	Not applicable	0.2 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Paselt, R.C. Shaskan, E. Gross, E.M. 1977
2890 Liver		GC	1	Not applicable	4.5 ug/g	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Paselt, R.C. Shaskan, E. Gross, E.M. 1977

Pyridine, 2-(p-chloro-alpha-(2-(dimethylamino)ethyl)benzyl)- (9 CI)
2-Pyridinepropanamine, gamma-(4-chlorophenyl)-N,N-dimethyl- (9 CI)
132-22-9
C16-H19-Cl-N2
MW 274,48, MP 130-135 C (Allergisan), BP 182 C at 1.0 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2791 Urine	Ingestion	HPLC	8	a) 1.19-0.938 mg b) 0.835-0.537 mg c) 0.298-0.161 mg	a) 0.914 mg b) 0.696 mg c) 0.222 mg	a) Chlorpheniramine b) Monodesmethyl chlorpheniramine, a metabolite c) Didesmethyl chlorpheniramine, a metabolite 24-hr urines. Dose, 8 mg chlorpheniramine maleate and 120 mg pseudoephedrine HCl with or without NH4Cl. pH range, 5.31-5.95. Other data available. Healthy, nonsmoke subjects on no other drugs, enzyme-inducing agents, or monoamine oxidase inhibitors for 1 month, no caffeine or alcohol during study. DRUGS; MEASUREMENT METHODS; URINE; METABOLITES; METABOLISM	Lai, C.M. Stoll, P.G. Look, I.M. Yacobi, A. 1979

Pyridine, 2,6-diamino-3-(phenylazo)- (8 CI)
2,6-Pyridinediamine, 3-(phenylazo)- (9 CI)
94-76-0
C11-H11-N5
88 213

TISSUE	DISPOSAL ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2892 Urine	Ingestion		6	Not given	81.0%	6x100 mg tablets of phenazopyridine hydrochloride. % of dose in 24-hr urine. 6 healthy males, aged 25-40 yrs. DRUGS; METABOLITES; URINE; CANADA	Johnson, W.J. Chartrand, A. 1976

Pyridinium, 1-((2-carboxy-8-oxo-7-(2-(2-thienyl)acetamido-)-5-thia-1-azabicyclo(4.2.0)oct-2 -en-3-yl)methyl)-, hydroxide, inner salt (9 CI) (VAR)
Pyridinium, 1-((2-carboxy-8-oxo-7-((2-thienylacetyl)amino)-5-thia-1-azabicyclo(4.2.0)oct-2- en-3-yl)methyl)-, hydroxide, inner salt, (6R-trans)- (9 CI)
50-59-9
C19-H17-N3-O4-S2
MW 415.50

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2993 Urine	Injection	Microbiological	10	a) 307-405 mg b) 254-367 mg	a) 353 mg b) 316 mg	a) Thigh injection b) Buttock injection 8-hr excretion after 500-mg dose. 9 males and 1 female. DRUGS; ANTIBIOTICS; BLOOD SERUM; URINE; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Reeves, D.S. Bywater, R.J. Wise, R. Whitmarsh, V.P. 1974

Pyridoxal (9 CI)
3,5-Pyridinedimethanol, 5-hydroxy-6-methyl- (9 CI)
65-23-6
C8-H11-N-O3
MP 159.10, BP 160 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSE	GRAD	GENERAL INFORMATION	REFERENCE
2094 Blood, plasma	Ingestion	Microbiological Enzymatic	5	a) 3.5-4.9 nmoles/dl b) 1.8-25.8 nmoles/dl c) 0.5-1.0 nmoles/dl d) 0.7-4.9 nmoles/dl	a) Not given b) Not applicable c) Not given d) Not applicable	a) Total B-6 0-9 hr at a pyridoxine dose of 0 mg (control) b) Peak increments above predose, total B-6 for doses of 0.5-16 mg. Linear relationship between total B-6 and dose over this range (P<0.01). Peaks 0.5-1 hr. c) Pyridoxal phosphate levels 0-9 hr at a pyridoxine dose of 0 mg (control). d) Peak increments in pyridoxal phosphate 0-5 hr after 0.5-16 mg pyridoxine. Peaks at 0.5-1 hr. Decline much slower than total B-6 Estimates from graphs. Healthy men, 20-32 yr old, on B-6-controlled diet and fasted before and after dose. VITAMINS; METABOLISM; METABOLITES; ADULTS; BLOOD PLASMA; URINE	Morenshi, J.S. Leklem, J.E. Miller, L.T. 1980
2095 Urine	Ingestion	Microbiological Fluorometry	5	a) Not given b) Not given c) Not given	a) 51.5 +or- 6% of dose b) 57.3 +or- 6.8% of dose c) 59.6 +or- 20.8% of dose	a) After 25.0 umoles B-6, dosed with pyridoxine. 5.7% of dose excreted as B-6 b) After 25.8 umoles B-6, dosed with pyridoxamine. 8.7% of dose excreted as B-6 c) After 25.8 umoles B-6, dosed with pyridoxol. 8.6% of dose excreted as B-6 Mean total 24-hr excretion of B-6 plus 4-pyridoxic acid after equimolar doses of 3 B-6 vitamers plus 6.4 umoles B-6 in lunch and dinner. Apparently healthy men, 24-31 yr old, on B-6-controlled diet and fasted before and after dose. VITAMINS; METABOLISM; METABOLITES; ADULTS; BLOOD PLASMA; URINE	Morenshi, J.S. Leklem, J.E. Miller, L.T. 1980

Pyrimidine, 2,4-diamino-5-(3,4,5,-trimethoxybenzyl)- (8 CI)
2,4-Pyrimidinediamine, 5-((3,4,5-trimethoxyphenyl)methyl)- (9 CI)
738-70-5
C14-H18-N4-O3
MW 290.32, MP 199-203 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2896 Blood, serum	Ingestion	Fluorometry		3.2-5.5 ug/ml	Not applicable	Range of means 2 hr after dose, day 1 and 9. 5.0 ug/ml on day 12, end of trial. Dose, 20 mg/kg/day trimethoprim with 100 mg/kg/day sulfamethoxazole at 6-hr intervals. Estimated from graph. Number of cases varied from 5-20 depending on response to therapy. Children with pneumocystis carinii pneumonitis, receiving immunosuppressive therapy for malignancy. Some on antibiotics. Vomiting or urticarial rash in 4 patients. DRUGS; DRUG THERAPY; INFECTION; CHILDREN; NEOPLASMS; TENNESSEE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Hughes, W.T. Feldman, S. Chaudhary, S.C. Ossi, M.J. Cox, F. Sanyal, S.K. 1978
2897 Blood, serum	Ingestion	Fluorometry	1	Not applicable	19.6 mg/l	14 hr after ingestion of 8 g. 28-yr-old manic depressive, but otherwise healthy male. Attempted suicide by ingesting 80 100-mg tablets of trimethoprim. Was receiving doxepine, 25 mg 2X/day. Vomited at 6 hr. Headache, swollen face and weakness at 14 hr. No further symptoms after gastric lavage with activated charcoal. DRUGS; DRUG ABUSE; SUICIDE; CASE HISTORIES; LAVAGE; FINLAND; BLOOD SERUM	Hoppu, K. Partanen, S. Koskela, E. 1980

Pyrimido(1,2-a)indol-10-ol, 10-(3-chlorophenyl)-2,3,6,10-tetrahydro-
37751-39-6
C17-H15-Cl-N2-O
MW 298.79

TISSUE	DISPOSED ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2998 Blood, plasma	Ingestion	GC		a) 0.39-1.00 ug/ml b) 0.88-0.93 ug/ml c) 0-0.89 ug/ml	a) 0.70 + or - 0.08 ug/ml b) 0.69 + or - 0.07 ug/ml c) 0.58 + or - 0.12 ug/ml	a) 2 hr after 50 mg b) 4 hr after 50 mg c) 6 hr after 50 mg Healthy subjects, ages 29 plus or minus 13 yrs. Reduced appetite ANTIDEPRESSIVE AGENTS; SPITZI KINGDOM; DRUGS; DRUG THERAPY; COMPARATIVE EVALUATIONS; IN VITRO ANALYSIS; BLOOD PLASMA; PSYCHOTROPIC DRUGS; NEUROLOGIC MANIFESTATIONS	Oh, Y.M.S. Khanullah, F.S.B. Leighton, M. Kirby, B.J. 1979

Quartz (9 CI)
Quartz [SiO2] (9 CI)
14808-60-7
C2-Si
MW 60.08, MP 1423 C, BP 2230 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2990 Lung		X-ray defraction EM ES	30	0.02-0.75%	0.20%	Percentage of 2 g ground, dried lungs Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, E.G. Wolowicz, P.P. Knott, M.J. Holtz, J.L. Gorski, C.B. 1967
2900 Lung			30	20-450 mg/100 g dry wt	200 mg/100 g dry wt	Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, E.G. Crable, J.V. Smallwood, A.W. Carlberg, J.E. 1971

Quinidine (8 CI)
Cinchonan-9-ol, 6'-methoxy-, (9S)- (9 CI)
56-54-2
C20-H24-N2-O2
MW 324.41, MP 174-175 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2901 Blood, plasma	Ingestion	Fluorometry	20	a) 16.8-585 ng/ml b) 24.5-329 ng/ml	a) Not given b) Not given	a) Low and peak, 0.25 and 36 hr after 200-mg quinidine sulfate. Peak at 1 hr b) Low and peak, dose-corrected, 0.25 and 36 hr after 330-mg quinidine gluconate. Peak at 6 hr Curves for individuals have 2 peaks for gluconate. Salts have equal bioavailability. 20 healthy volunteers ages 21-54 yr. DRUGS; DRUG THERAPY; ADULTS; MISSOURI; UTAH; BLOOD PLASMA; COMPARATIVE EVALUATIONS; NEUROMUSCULAR DISEASES	Covinsky, J.O. Russo, J., Jr. Kelly, K.L. Cashman, J. Amick, E.B. Mason, W.D. 1979
2902 Blood, serum	Ingestion	Fluorometry	8	a) 0-1.96 ug/ml b) 0-1.73 ug/ml	a) Not given b) Not given	a) 0 and 1.47 hr, fasting before and after dose. 0.13 ug/ml at 30 hr, final value b) 0 and 2.41 hr, postprandial dose. 0.13 ug/ml at 30 hr, final value Range of means after 400 mg as sulfate. Estimated from graph. Healthy subjects, 28-33 yr, no other medication. Nausea, lethargy, nasal congestion, rapid heart rate, diarrhea. DRUGS; ANTIARRHYTHMIC AGENTS; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS; URINE	Woo, E. Greenblatt, D.J. 1980
2903 Urine	Ingestion	Fluorometry	8	a) Not given b) Not given	a) 85.3 + or - 8.5 mg b) 90.8 + or - 7.7 mg	a) Fasting before and after dose b) Postprandial dose Cumulative excretion extrapolated to infinity from 48-hr rate. Not different, p>0.05. Healthy subjects, 28-33 yr, no other medication. Nausea, lethargy, nasal congestion, rapid heart rate, diarrhea. DRUGS; ANTIARRHYTHMIC AGENTS; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS; URINE	Woo, E. Greenblatt, D.J. 1980

Quinoline, 7-chloro-4-((6-(diethylamino)-1-methylhexyl)amino)- (9 CI)
1,4-Pentanediamine, N(4)-(7-chloro-4-quinolinyl)-N(1),N(1)-diethyl- (9 CI)
54-05-7
C18-H26-Cl-N3
MW 319.89, MP 87 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	SPAN	GRAPH INFORMATION	REFERENCE
2904 Blood, serum	Ingestion	Fluorometry	100	a) < 0.2 ug/ml b) 0.2-0.39 ug/ml c) 0.4-0.59 ug/ml d) 0.6-0.79 ug/ml e) > or = 0.8 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 8% of patients b) 40% of patients c) 27% of patients d) 17% of patients e) 10% of patients Patients on 0.25 g/day > 14 days. Patients, ages 23-78 yr, at rheumatology clinic Frequency of side effects, (visual and central nervous system disturbances, confusion in 1%) increased with serum level. DRUGS; SWEDEN; RHEUMATOID ARTHRITIS; ADULTS; NEUROLOGIC MANIFESTATIONS; BLOOD SERUM	Frisk-Holmberg, M. Bergkvist, Y. Domeij-Fyberg, S. Hellstrom, L. Jansson, F. 1976

Riboflavin
83-88-5
C17-H20-N4-O6
MW 376.36, MP 278-282 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2905 Urine			187	a) Not given b) Not given	a) 1396 ug/g creatinine b) 2661 ug/g creatinine	a) Men b) Women Criteria for low levels < 90 ug/g creatinine. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978

Rubidium
7440-17-7
Rb
ATW 85.4678, MP 39 C, BP 688 C, VP 10 mm Hg at 390 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2906 Aorta		X-ray spectros	6	Not given	9.09 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2907 Blood		NA	a) 712 b) 681	a) Not given b) Not given	a) 15.4 + or - 3.2 ug/g b) 17.8 + or - 8.0 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, P.J. Brul, A.B. Schubert, A. Wilson, D. Larsen, K. Dyer, W. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1978
2908 Hair		NA	11	0.20-3.40 ppm	1.35 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
2909 Kidney		X-ray spectros	12	a) Not given b) Not given	a) 19.0 ppm dry wt b) 15.5 ppm dry wt	a) Medulla, 11 of 12 cases b) Cortex, 12 cases 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2910 Liver		X-ray spectros	10	Not given	13.0 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Rubidium
7440-17-7
Rb
At# 85.4678, MP 39 C, BP 688 C, VP 10 mm Hg at 390 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2911 Pancreas		X-ray spectros	4	Not given	15.51 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2912 Placenta		NA	926	Not given	25.0 + or - 5.8 ug/g	Dry wt basis Samples from 6 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, E. Schaffner, W. Hoffman, L. Davies, J. 1974
2913 Spleen		X-ray spectros	9	Not given	22.2 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
2914 Urine		NA	a) 1 b) 1	a) 1.1-2.6 mg/24 hr b) 1.57-2.61 mg/24 hr	a) 2.0 mg/24 hr b) 2.09 mg/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

S-Sulfonate (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2915 blood, plasma			20 (80 samples)	a) Not given b) Not given c) Not given	a) 1.7 nmoles/ml b) 3.6 nmoles/ml c) 5.3 nmoles/ml	a) 1 ppm atmospheric SO2 b) 3 ppm atmospheric SO2 c) 5 ppm atmospheric SO2 levels based on regression analysis of data. healthy adult nonsmokers (mean age 22 yr) and smokers (mean age 34 yr). BLOOD PLASMA; SULFUR; NEW YORK; COMPARATIVE EVALUATIONS	Gunnison, A.F. Palmes, E.D. 1974

Salicylic acid (8 CI)
Benzoic acid, 2-hydroxy- (9 CI)
69-72-7
C7-H6-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2916 Blood, plasma		Radiometry	3	a) 0.04-0.28 mg/100 ml b) 0.27-0.61 mg/100 ml c) 0.73-0.96 mg/100 ml d) 0.18-0.79 mg/100 ml	a) 0.12 mg/100 ml b) 0.42 mg/100 ml c) 0.87 mg/100 ml d) 0.51 mg/100 ml	a) 0.5 hr after 1 g dose b) 1 hr after 1 g dose c) 3 hr after 1 g dose (peak) d) 9 hr after 1 g dose Dose was of 2(p-aminobenzoyloxy)[carboxyl-C14]benzoic acid. Healthy adults ANTI-INFLAMMATORY AGENTS; ANALGESICS; BLOOD PLASMA; URINE; METABOLITES; DRUGS	Smyth, R.D. Polk, A. Diamond, J. Burns, B.J. Herczeg, T. 1974

Salicylic acid acetate (8 CI)
Benzoic acid, 2-(acetyloxy)- (9 CI)
50-78-2
C9-H8-O4
MW 193.2, MP 135 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2917 Blood, plasma	Ingestion		10	a) Not given b) 10.22-17.40 mg/dl	a) 0.15 mg/dl b) 12.64 mg/dl	a) Wk 1, placebo only b) Wk 2 and 3, days 3-6, 1.3 g aspirin t.i.d. %retreatment levels 36 hr after last dose. 20 healthy males, ages 21-50 yr. 5-10 fold increase in fecal blood loss over control period. DRUGS; DRUG THERAPY; FLORIDA; ADULTS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; GASTROINTESTINAL SYSTEM	Cohen, A. 1979
2918 Blood, plasma	Ingestion	3C	6	a) 1.2-5.0 ug/ml b) 0.3-4.5 ug/ml c) 0.6-5.4 ug/ml d) 0.3-8.1 ug/ml e) 0.7-11.0 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) After high carbohydrate meal b) After high fat meal c) After high protein meal d) Fasting e) Fasting 650 mg dose with 250 ml or 25 ml (case d) of water. Healthy males 21-30 yr old weighing 66-87 kg. DRUGS; METABOLITES; BLOOD PLASMA; DIETS; WISCONSIN	Koch, P.A. Schultz, C.A. Wills, F.J. Hallquist, S.L. Welling, P.G. 1978
2919 Blood, whole	Ingestion		21	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 6.40 ug/ml b) 6.26 ug/ml c) 5.90 ug/ml d) 5.74 ug/ml e) 5.09 ug/ml f) 4.86 ug/ml g) 3.94 ug/ml	a) 650 mg acetylsalicylic acid (ASA) + 650 mg acetaminophen (APAP) + 65 mg caffeine (CF) b) 650 mg ASA + 650 mg APAP c) 650 mg ASA + 650 mg APAP + 130 mg CF d) 650 mg ASA + 325 mg APAP + 130 mg CF e) 650 mg ASA + 325 mg APAP f) 650 mg ASA + 325 mg APAP + 65 mg CF g) 650 mg ASA levels 20 min after dosing. DRUGS; BLOOD	Cotty, V.F. Sterbenz, F.J. Mueller, F. Melmen, K. Ederma, H. Skerpac, J. Hunter, D. Lehr, M. 1977

Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (VAN)
63-36-5
C7-H5-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2920 Blood	Ingestion		1	70-1 mg/dl	Not given	Range of levels from admission to 60 hr later. 5.5 yr old treated with aspirin every 4-8 hr for 7 days. 2 days before admission 300 mg aspirin and 300 mg acetaminophen were given alternately every 2 hr. 300 mg dose of acetaminophen given at admission. Just prior to admission: abdominal pain and vomiting. At admission: comatose, unresponsive to painful stimuli, tachypneic with evidence of shock. Leukocytosis, hypoglycemia, hyperammonemia, hypoprothrombinemia, elevated alkaline phosphatase, metabolic acidosis. Urine was deep orange-red. Marked diffuse, nonfocal cerebral dysfunction. DRUGS; DRUG THERAPY; IOWA; CHILDREN; BLOOD; CASE HISTORIES; HEALTH HAZARDS; NEUROLOGIC MANIFESTATIONS	Dickers, R.G. Roberts, R.J. 1979
2921 Blood			37	14.0-1251.0 ug/ml	171.3 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; ISTHMOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
2922 Blood, plasma	Ingestion	GC	6	a) 0.1-46.6 ug/ml b) 0.1-51.2 ug/ml c) 0.1-43.6 ug/ml d) 9.4-46.9 ug/ml e) 0.1-65.2 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) After high carbohydrate meal b) After high fat meal c) After high protein meal d) Fasting e) Fasting 650 mg dose with 250 ml or 25 ml(case d) water. Healthy males 21-30 yr old weighing 66-87 kg. DRUGS; METABOLITES; BLOOD PLASMA; DIETS; WISCONSIN	Koch, P.A. Schultz, C.A. Wills, R.J. Hallquist, S.L. Welling, P.G. 1978
2923 Blood, plasma	Ingestion	Fluorometry	9	a) 0-100 ug/ml b) 200-0 ug/ml	a) Not given b) Not given	a) Range of means, days 1 and 4 b) Range of means, 4 and 32 hr postdose on day 4.100 ug/ml at 0 hr Dose, 3x972 mg (day 1-3) and 1x972 mg (day 4). Piroxicam given concurrently. 8 healthy males DRUGS; DRUG THERAPY; BLOOD PLASMA; CONNECTICUT; ANTI-INFLAMMATORY AGENTS; ANALGESICS; COMPARATIVE EVALUATIONS; ADULTS	Hobbs, D.C. Twomey, T.E. 1979

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Salicylic acid, ion(1-) (8 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (789)
63-36-5
C7-H5-O3
MW 137.12, MP 157-159 C, BP about 211 C at 20 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2924 Blood, serum	Ingestion	UV	6	a) 126-225 ug/ml b) 135-269 ug/ml	a) Not given b) Not given	a) After 650 mg every 4 hr for 48 hr b) After 1300 mg at 0 time and 4 hr, then 650 mg every 4 hr for 40 hr levels of 150 ug/ml produced by 15 hr with loading regimen, by 30 hr with conventional regimen. Healthy volunteers, mean age 27.7 yr, mean wt 74.6 kg. 1 subject reported transient tinnitus. DRUGS; DRUG THERAPY; ANTI-INFLAMMATORY AGENTS; ANALGESICS; ANTIPYRETICS;; METABOLITES; BLOOD SERUM; TEXAS	Talbert, P.L. Ludden, T.M. West, R.T. 1979
2925 Blood, serum	Ingestion	Colorimetry	6	a) 16.1-31.9 mg/dl b) 13.6-32 mg/dl	a) 23.1 mg/dl b) 23.5 mg/dl	a) 8-hr intervals b) 12-hr intervals mean daily range, avg 58.7 mg/kg/day. 3 men, 3 women, 28-57 yr, with rheumatoid arthritis. Mild, continuous tinnitus in 3 patients. DRUGS; DRUG THERAPY; ADULTS; BLOOD SERUM; CALIFORNIA; COMPARATIVE EVALUATIONS; RHEUMATOID ARTHRITIS; DISEASES	Cassell, S. Furst, D. Dromgoole, S. Paulus, H. 1979
2926 Blood, serum	Ingestion		1	Not given	385 mg/l	After 2.5 g in 48 hr as ointment applied to gums. (Recommended dosage <430 mg/48 hr) 23-mo old child Semi-conscious, apyrexial, dehydrate. Pulse, 150/min, white cell count 16,900/ml, urine strongly positive for ketones. Recovery within 48 hr. DRUGS; DRUG THERAPY; CHILDREN; CASE HISTORIES; BLOOD SERUM; UNITED KINGDOM	Paynter, A.S. Alexander, F.W. 1979
2927 Blood, whole	Ingestion		1	49-25.2 mg/dl	Not given	Levels for 18 hr period during second day of hospitalization following accidental ingestion. 28 mo old Vomiting, respiratory difficulty, apyrexia, severe metabolic acidosis. Alveolar edema with hyaline membranes and intracapillary fibrinous thrombi. DRUGS; DRUG ABUSE; CHILDREN; BLOOD; CASE HISTORIES; BELGIUM	Kahn, A. Blum, D. 1979

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Salicylic acid, ion(1-) (9 CI)
Benzoic acid, 2-hydroxy-, ion(1-) (9 CI) (FAN)
63-36-5
C7-H5-O3
MW 138.12, MP 157-159 C, BP about 211 C at 20 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2928 Urine	Ingestion		a) 5 b) 5	a) 330-375 mg/8 hr period b) 215-426 mg/8 hr period	a) 378 mg/8 hr period b) 360 mg/8 hr period	a) Amount of 2-(p-aminobenzoyloxy)[carboxyl-14C]benzoic acid expressed as salicyclic acid b) Amount of parent compound expressed as p-aminobenzene acid Healthy adults ANTI-INFLAMMATORY AGENTS; ANALGESICS; BLOOD PLASMA; URINE; METABOLITES; DRUGS	Smyth, R.D. Polk, A. Diamond, J. Burns, B.J. Herczeg, T. 1974

Salicylic acid, p-aminobenzoate (8 CI)
Benzoic acid, 2-((4-aminobenzoyl)oxy)- (9 CI)
23787-97-5
C14-H11-N-O4
MW 257.24

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2929 Blood, plasma	Injection	Radiometry	1	a) 0.61-5.06 mg/100 ml b) 2.83-7.91 mg/100 ml c) 5.81-8.92 mg/100 ml d) 1.45-3.04 mg/100 ml	a) 2.11 mg/100 ml b) 5.70 mg/100 ml c) 7.23 mg/100 ml d) 2.26 mg/100 ml	a) 0.5 hr after 1 g dose b) 1 hr after 1 g dose c) 3 hr after 1 g dose d) 9 hr after 1 g dose Healthy adults ANTI-INFLAMMATORY AGENTS; ANALGESICS; BLOOD PLASMA; URINE; METABOLITES; DRUGS	Smyth, R.D. Polk, A. Diamond, J. Burns, B.J. Herczeg, T. 1974

Salicylic acid, 5-[[p-(2-pyridylsulfamoyl)phenyl]azo]- (8 CI)
Benzoic acid, 2-hydroxy-5-[[4-[(2-pyridinylamino)sulfonyl]phenyl]azo]- (9 CI)
519-79-1
C18-H14-N4-O5-S
MW 398.39, MP 200-205 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2930 Urine	Ingestion		6	1.46-6.30% of dose	3.36% of dose	Cumulative 6-day excretion after 2.0 g. 4 healthy Thais, ages 28-46 yr, fasted 8-10 hr before dosing. 2 patients, ages 63 and 70 yr, with blind-loop syndrome. THAILAND; URINE; BLOOD PLASMA; METABOLITES; METABOLISM; COMPARATIVE EVALUATIONS; ADULTS; DISEASE	Thithapandha, A. 1970

Samarium
7440-19-9
Sm
AtW 150.4, MP 1072 C, BP 1778 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2931 Hair		NA	11	Not detectable-0.02 ppm	0.010 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977

Scandium
7440-20-2
Sc
AAN 44.9559, RP 1530 C, RP 2832 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2932 Hair		NA	11	0.0068-0.0178 ppm	0.0131 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977

Selenium
7782-49-2
Se
Atw 78.96, MP 170-217 C, BP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2933 Blood	Dermal Inhalation		1	Not applicable	23 ug/100 g	August 1977 Air level of SeO2 generally at or near 0.2 mg/cu m. 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; ZINC; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.D. Boylen, E.C. 1979
2934 Blood		NR	a) 717 b) 681	a) Not given b) Not given	a) 1.10 + or - 0.28 ug/g b) 1.08 + or - 0.29 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, P.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, N. Schaffner, W. Hoffman, L. Davies, J. 1974
2935 Blood, cells	Ingestion	Fluorometry	a) 104 b) 71 c) 64	a) Not given b) Not given c) Not given	a) 0.076 + or - 0.015 ug/ml b) 0.067 + or - 0.019 ug/ml c) 0.069 + or - 0.016 ug/ml	a) Normal subjects b) Cancer patients c) Noncancer surgical patients Residents of Otago, South Island, New Zealand, where most arable land has low soil Se content. METALS; SELENIUM; TRACE ELEMENTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ENZYMES; AGE; ERYTHROCYTES; NEW ZEALAND	Robinson, M.F. Godfrey, P.J. Thomson, C.D. Rea, H.M. van Rij, A.M. 1979
2936 Blood, cells						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
2937 Blood, plasma	Ingestion	Fluorometry	a) 104 b) 71 c) 63	a) Not given b) Not given c) Not given	a) 0.069 + or - 0.010 ug/ml b) 0.036 + or - 0.014 ug/ml c) 0.060 + or - 0.014 ug/ml	a) Normal subjects b) Cancer patients c) Noncancer surgical patients Residents of Otago, South Island, New Zealand, where most arable land has low Se content. METALS; SELENIUM; TRACE ELEMENTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ENZYMES; AGE; ERYTHROCYTES; NEW ZEALAND	Robinson, M.F. Godfrey, P.J. Thomson, C.D. Rea, H.M. van Rij, A.M. 1979

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Selenium
7782-49-2
Se
AW 78.96, BP 170-217 C, BP 685 C, VP 1 mm Hg at 396 C, 10 mm Hg at 829 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2938 Blood, plasma						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
2939 Blood, whole	Ingestion	AAS	83	13.3-28.8 ug/100 ml	17.1 ug/100 ml	Participants had lived in area at least 1 yr. Population studied was from New Mexico. SELENIUM; BLOOD; HAIR; URINE; DRINKING WATER; NEW MEXICO	Valentine, J.L. Kang, H.K. Spivey, G.H. 1978
2980 Blood, whole	Ingestion	Fluorometry	a) 104 b) 80 c) 66	a) Not given b) Not given c) Not given	a) 0.060 + or - 0.012 ug/ml b) 0.050 + or - 0.016 ug/ml c) 0.058 + or - 0.018 ug/ml	a) Normal subjects (16-65 yr old) b) Cancer patients (av age 63 yr) c) Noncancer surgical patients (av age 53 yr) Normal subjects >60 yr old had lower levels than those <60 yr old Strong correlation between Se level and activity of Se-containing glutathione peroxidase in normal subjects and cancer patients Enzyme data available. Residents of Otago, South Island, New Zealand, where most arable land has low soil Se content. METALS; SELENIUM; TRACE ELEMENTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ENZYMES; AGE; ERYTHROCYTES; NEW ZEALAND	Robinson, M.F. Godfrey, P.J. Thomson, C.D. Rea, H.M. van Rij, A.M. 1979
2981 Hair	Ingestion	AAS	39	0.02-2.0 ug/g	0.46 ug/g	Participants had lived in area at least 1 yr. Population studied was from New Mexico. SELENIUM; BLOOD; HAIR; URINE; DRINKING WATER; NEW MEXICO	Valentine, J.L. Kang, H.K. Spivey, G.H. 1978
2982 Hair		NA	11	2.15-5.45 ppm	3.68 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977

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Selenium
7782-49-2
Se
Atw 78.96, BP 170-217 C, DP 685 C, VP 1 mm Hg at 356 C, 10 mm Hg at 429 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2983 Hair		AAS	a) 260 b) 188	a) 0.025-1.65 ug/g b) 0.025-1.58 ug/g	a) 0.320 ug/g b) 0.303 ug/g Geometric means	a) Children b) Adults Higher Se levels in smokers than nonsmokers. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Winners, T.A. Baumgarner, J.E. Pinkerton, C. 1975
2984 Milk						Review REVIEW; METALS; TRACE ELEMENTS; COPPER; MANGANESE; SELENIUM; CHROMIUM; NEWBORN; FETUS; BLOOD PLASMA; ERYTHROCYTES; MILK; LIVER; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; AMNIOTIC FLUID	Shaw, J.C.L. 1980
2985 Placenta		NA	922	Not given	1.70 + or - 0.61 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Baglan, R.J. Brul, A.B. Schalert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, H. Schaffner, W. Hoffman, L. Davies, J. 1974
2986 Urine	Ingestion	AAS	35	21.5-203.0 ug/l	79.3 ug/l	Participants had lived in area at least 1 yr. Population studied was from New Mexico. SELENIUM; BLOOD; HAIR; URINE; DRINKING WATER; NEW MEXICO	Valentine, J.L. Kang, H.K. Spivey, G.H. 1978
2987 Urine		NA	a) 1 b) 1	a) 36.9-184 ug/24 hr b) 19.5-27 ug/24 hr	a) 66.4 ug/24 hr b) 23.2 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975

Silica
7631-86-9
O2-Si
MW 60.08, MP 1610 C, BP 2230 C, VP 10 mm Hg at 1732 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2948 Lung			a) 30 b) 26 c) 23 d) 21	a) 20-650 mg/100 g dry wt b) 30-560 mg/100 g dry wt c) 50-470 mg/100 g dry wt d) 13-750 mg/100 g dry wt	a) 200 mg/100 g dry wt b) 206 mg/100 g dry wt c) 172 mg/100 g dry wt d) 203 mg/100 g dry wt	a) April and May 1965 b) March 1966 c) Dec 1966 to March 1967 d) Nov 1967 Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
2949 Lung			a) 168 b) 18	a) 0.17-0.21 g/100 g dry wt b) Not given	a) 0.19 g/100 g dry wt b) 0.04 g/100 g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crosse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1978
2950 Lung			185	Not given	0.20 g/100 g dry wt	Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Liutiaca, L.P. Morris, H.B. Holtz, J.L. Mauer, P. Wolowicz, F.B. 1971
2951 Lung		X-ray spectros	2	a) Not given b) Not given	a) 25 particles b) 12 particles	a) Case 1, 500 particles analyzed b) Case 2, 500 particles analyzed 5.8% of particles in air filters were silica. 2 welders: 1 air-arc welder in open spaces, 1 arc welder in confined spaces. Case 1, moderate non-specific lung disease with obstructive and restrictive components. Case 2, severe restrictive lung disease. Interstitial fibrosis and dispersed aggregates of macrophages containing dark brown and black particulates. METALS; ALUMINUM; OCCUPATIONAL HAZARDS; MEASUREMENT METHODS; LUNGS	Stettler, L.E. Groth, D.H. Mackay, G.R. 1977

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Silica
7631-86-9
O2-Si
MW 60.08, MP 1610 C, BP 2230 C, VP 10 mm Hg at 1732 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2952 Lymph node			a) 23 b) 13	a) 30-2400 mg/100 g dry wt b) 74-1489 mg/100 g dry wt	a) 792 mg/100 g dry wt b) 693 mg/100 g dry wt	a) Dec 1966 to March 1967 b) Nov 1967 Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971

Silicate (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2953 Lung		X-ray spectros	2	a) Not given b) Not given	a) 31 particles b) 24 particles	a) Case 1, 500 particles analyzed b) Case 2, 500 particles analyzed 4.9% of particles in air filters were silicate. 2 welders: 1 air-arc welder in open spaces, 1 arc welder in confined spaces. Case 1, moderate non-specific lung disease with obstructive and restrictive components. Case 2, severe restrictive lung disease. Interstitial fibrosis and dispersed aggregates of macrophages containing dark brown and black particulates. METALS; ALUMINUM; OCCUPATIONAL HAZARDS; MEASUREMENT METHODS; LUNGS	Stettler, L.E. Groth, D.H. Mackay, G.R. 1977

Silicon
7440-21-3
Si
AtW 28.086, MP 1410 C, BP 2600 C, VP 1 mm Hg at 1724 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2958 Hair		NA	11	0.01-0.04 ppm	0.025 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, E. 1977
2955 Kidney		ES	a) 130 b) 74 c) 86	a) Not given b) Not given c) Not given	a) 14.2 ppm b) 21.6 ppm c) 23.8 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2956 Liver		ES	a) 91 b) 44 c) 76	a) Not given b) Not given c) Not given	a) 13.3 ppm b) 23.6 ppm c) 22.4 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapresit, S. Alexander, G.V. Gonick, H.C. 1974
2957 Lung		ES	30	250.0-1965.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; FABRIC; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.B. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967

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Silicon
7440-21-3
Si
AtW 28.086, MP 1410 C, BP 2600 C, VP 1 mm Hg at 1726 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2958 Spleen		ES	a) 92 b) 42 c) 76	a) Not given b) Not given c) Not given	a) 27.6 ppm b) 40.7 ppm c) 40.1 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and c) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2959 Urine	Ingestion	AAS	11	a) Not given b) Not given	a) 12.2 + or - 1.1 mg/day b) 16.0 + or - 2.6 mg/day	a) Low fiber diet plus 21.0 mg Si/day for 26 days b) High fiber diet plus 45.8 mg Si/day for 26 days Mean + or - S.E. Samples collected during last 7 days. Balance data available. 37-48 yr old men METALS; TRACE ELEMENTS; MINERALS; URINE; ADULTS; FECES; CALCIUM; MAGNESIUM; IRON; SILICON; COMPARATIVE EVALUATIONS; DIETS; FIBERS; METABOLISM; MARYLAND	Kelsay, J.L. Behall, K.M. Prather, E.S. 1979

Silver
7440-22-4
Ag
Atw 107.868, MP 960.5 C, BP 2000 C, VP 1 mm Hg at 1310 C, 10 mm Hg at 1540 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2960 Blood	Dermal Inhalation	AAS	a) 6 b) 6 c) 8 d) 8	a) Not applicable b) 1.9-5.7 ug/100 ml c) 1.1-8.4 ug/100 ml d) 1.2-5.7 ug/100 ml	a) 1.8 ug/100 ml b) 3.6 ug/100 ml c) 3.6 ug/100 ml d) 2.5 ug/100 ml	a) Employed 1 yr or less - 1 with measurable levels b) Employed 1.1-4.9 yr - 3 with measurable levels c) Employed 5.0-9.9 yr - 3 with measurable levels d) Employed 10 or more yr - 5 with measurable levels Smallest detectable level 0.6 ug/100 ml. 29 current employees and 1 past employee of small silver plant in upstate New York, including office and laboratory personnel. Average age 38.6 yr. Eye, nose, throat, and respiratory tract irritation, nose bleeds, nausea, headaches, nervousness, tiredness, change in skin and eye color, decreased night vision. Argyria Argyrosis METALS; SILVER; BLOOD; SKIN DISEASES; OCCUPATIONAL HAZARDS; ADULTS; NEW YORK	Rosenman, K.D. Moss, A. Kon, S. 1979
2961 Hair		NA	11	0.20-1.85 ppm	0.87 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
2962 Hair		ES	a) 179 b) 108 c) 102 d) 109	a) Not given b) Not given c) Not given d) Not given	a) 0.18 ug/g b) 0.28 ug/g c) 0.18 ug/g d) 0.15 ug/g Geometric means	a) Male children b) Female children c) Male adults d) Female adults Correlation between Ag and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975

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Silver
7440-22-4
Ag
Atw 107.868, MP 960.5 C, BP 2000 C, VP 1 mm Hg at 1310 C, 10 mm Hg at 1540 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2963 Kidney		ES		a) Not given b) Not given c) Not given	a) 0.70 ppm (13%) b) 4.66 ppm (6%) c) 7.61 ppm (7%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2964 Liver		ES		a) Not given b) Not given c) Not given	a) 0.70 ppm (13%) b) 4.66 ppm (6%) c) 7.61 ppm (7%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2965 Lung		ES	30	Not detectable-2.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.R. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967
2966 Spleen		ES		a) Not given b) Not given c) Not given	a) 2.68 ppm (9%) b) 1.02 ppm (3%) c) 3.78 ppm (7%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

Sodium
7440-23-5
Na
AtW 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 546 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2967 Blood, serum		AAS	187	a) Not given b) Not given	a) 334 mg/100 ml b) 336 mg/100 ml	a) Men b) Women Criteria for low levels < 312 mg/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978
2968 Hair		NA	11	488-2931 ppm	1562 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
2969 Kidney		ES	a) 135 b) 74 c) 87	a) Not given b) Not given c) Not given	a) 10,000 ppm b) 12,100 ppm c) 11,500 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2970 Liver		ES	a) 92 b) 44 c) 76	a) Not given b) Not given c) Not given	a) 5880 ppm b) 6480 ppm c) 7030 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and c) different (P<0.01), b) and c) different (P<0.001) Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Sodium
7440-23-5
Na
Atw 22.98977, MP 97.82 C, BP 881.4 C, VP 1 mm Hg at 440 C, 10 mm Hg at 586 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2971 Nail		NA	a) 50 b) 50 c) 38 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 120.2 ug/g dry wt b) 155.3 ug/g dry wt c) 156.9 ug/g dry wt d) 194.9 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schaumchula, P.G. 1976
2972 Spleen		ES	a) 92 b) 40 c) 76	a) Not given b) Not given c) Not given	a) 6350 ppm b) 6250 ppm c) 7040 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and c) different (P<0.05), b) and c) different (P<0.005) Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
2973 Teeth		AAS	35	2780-5570 ppm	3740 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Reda, A. Aasenden, R. Bakhas, T. 1975
2974 Urine		NA	a) 1 b) 1	a) 2.1-8.4 g/24 hr b) 2.17-2.30 g/24 hr	a) 4.0 g/24 hr b) 2.23 g/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975
2975 Urine			a) 6 b) 6	a) 1.02-0.02 meq/min b) 2.15-0.03 meq/min	a) Not applicable b) Not applicable	a) Hypertensive patients b) Controls Range of mean rates of clearance 0-1 hr and 12-24 hr after 40 mg. Patients with severe hypertension <6 mo, with vascular complications, ages 42-63 yr, normal controls. All fasted. DRUGS; DRUG THERAPY; HYPERTENSION; DENMARK; PROTEINS; DIURETICS; URINE; ADULTS; COMPARATIVE EVALUATIONS; SODIUM	Andreasen, F. Pedersen, O.L. Nikkelsen, E. 1978

Sodium, ion (Na(1+))
17341-25-2
Na
Atw 22.98977

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2976 Milk				11-20 mg/dl	Not given	Women in Birmingham, Bristol, Cardiff, Edinburgh, and Newcastle. SODIUM; FLUORINE; IODINE; METALS; MILK; UNITED KINGDOM	Anon 1977

Stainless steel
12597-68-1
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2977 Lung		X-ray spectros	2	a) Not given b) Not given	a) 408 particles b) 344 particles	a) Case 1,500 particles analyzed b) Case 2,500 particles analyzed 83.9% of particles in filters were stainless steel. 2 welders: 1 air-arc welder in open spaces, 1 arc welder in confined spaces. Case 1, moderate non-specific lung disease with obstructive and restrictive components. Case 2, severe restrictive lung disease. Interstitial fibrosis and dispersed aggregates of macrophages cortaining dark brown and black particulates. METALS; ALUMINUM; OCCUPATIONAL HAZARDS; MEASUREMENT METHODS; LUNGS	Stettler, L.E. Groth, D.H. Mackay, G.R. 1977

Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-4)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-6))-2-deoxy-, D- (9 CI)
D-Streptamine, O-3-amino-3-deoxy-alpha-D-glucopyranosyl-(1-6)-O-(2,6-diamino-2,3,6-trideoxy-alpha-D-ribo-hexopyranosyl-(1-4))-2-deoxy- (9 CI)
32986-56-4
C18-H37-N5-O9
MW 467.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2978 Blood, serum	Injection	Microbiological	5	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 11.1 ug/ml b) 9.5 ug/ml c) 5.2 ug/ml d) 10.1 ug/ml e) 8.8 ug/ml f) 5.0 ug/ml	a) Time = 5 min b) Time = 10 min c) Time = 60 min d) Time = 5 min e) Time = 10 min f) Time = 60 min After 80 mg dose (a-c) or 1 mg/kg dose (d-f). Healthy adults (2 female, 3 male) aged 21-55 yr and wt 50-85 kg. DRUGS; ANTIBIOTICS; BLOOD SERUM	Stratford, B.C. Dixmon, S. Cobcroft, A.J. 1974
2979 Blood, serum	Injection	RIA	9	a) 8.8-16.1 ug/ml b) 0.10-0.37 ug/ml	a) 12.0 ug/ml b) 0.22 ug/ml	a) Peaks after 120-mg IV bolus. Peaks at first observation (5 min) b) 8 hr after 120-mg IV bolus. Morbidly obese women who had gastric bypass surgery, ages 24-36, weights 103-157 kg. DRUGS; ANTIBIOTICS; BLOOD SERUM; ADULTS; SURGERY	Blouin, R.A. Mann, H.J. Griffen, W.O. Bauer, L.A. Record, K.E. 1979

Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 890 C, 1 mm Hg at 740 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2980 Hair		NA	11	Not detectable-0.04	0.02 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
2981 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.51 ppm (6%) b) 0.35 ppm (10%) c) 0.44 ppm (30%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2982 Liver		ES		a) Not given b) Not given c) Not given	a) 0.18 ppm (2%) b) 0.31 ppm (3%) c) 0.59 ppm (1%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Strontium
7440-24-6
Sr
AtW 87.62, MP 357 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2983 Spleen		ES		a) Not given b) Not given c) Not given	a) 0.44 ppm (6%) b) 0.39 ppm (5%) c) 0.59 ppm (6%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHOROUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
2984 Teeth		AAS		26-132 ppm	67 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Reda, A. Aamenden, R. Bakhas, Y. 1975

Strontium, isotope of mass 90
10098-97-2
Sr
At# 38, MP 757 C, BP 1366 C, VP 10 mm Hg at 898 C, 1 mm Hg at 740 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2985 Teeth	Inhalation Ingestion	Radiometry	291 teeth	a) Not given b) Not given c) Not given	a) 2.3729 pCi/g ash b) 0.6280 pCi/g ash c) 0.4380 pCi/g ash	a) Deciduous b) 22-28 yr c) >34 yr Pooled samples, average 7 teeth per sample. Other data available. Teeth from people living in Lower Silesia in southwestern Poland. STRONTIUM; CALCIUM; CESIUM; POTASSIUM; RADIOISOTOPES; METALS; TEETH; POLAND	Slowiak, B.J. Pacyna, J. Palczynski, B.J. 1977

Strychnine (8 CI)
Strychnidin-10-one (9 CI)
57-24-9
C21-H22-N2-O2
MW 334.40, MP 268-270 C, BP 270 C at 5 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2986 Blood			2	4.9-5 ppm	5 ppm	Poisoning fatalities PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977
2987 Urine			1	Not applicable	8 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977

Styrene (8 CI)
Benzene, ethenyl- (9 CI)
100-42-5
C8-H8
MW 104.14, MP -31 C, BP 145-146 C, VP 39.4 atm at 378.4 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2988 Blood						Review REVIEW; STYRENES; METABOLISM; METABOLITES; BLOOD	Leibman, K.C. 1975

Succinamic acid, 3-amino-N-(alpha-carboxyphenethyl)-, N-methyl ester, stereoisomer (8 CI) (VAN)
L-Phenylalanine, N-L-alpha-aspartyl-, 1-methyl ester (9 CI)
22839-47-0
C14-H18-N2-O5
MW 294.30, Mp 246-247 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2989 Blood, cells		CC	a) 8 b) 12	a) 23-27 umoles/dg b) 22-23 umoles/dg c) 8.5-11 umoles/dg d) 4-6.5 umoles/dg	a) Not given b) Not given c) Not given d) Not given	a) Range of means, 0 and 8 hr after 34 mg/kg to normal subjects, measured as metabolite, aspartate b) Range of means, 0 and 8 hr after 34 mg/kg to phenylketonurics, measured as metabolite, aspartate c) Range of means, 0 and 8 hr after 34 mg/kg to normal subjects, measured as metabolite, phenylalanine d) Range of means, 0 and 8 hr after 34 mg/kg to phenylketonurics, measured as metabolite, phenylalanine. Estimated from graph. Adults, 8 female heterzygotes for phenylketonuria, 6 normal females, 6 normal males. Data show no detriment to PKU homozygous fetus with long-term maternal levels of < 10 mg/100 ml (60 umoles/100 ml). AMINO ACIDS; IONA; SWEETENING AGENTS; ADULTS; BLOOD PLASMA; BLOOD; COMPARATIVE EVALUATIONS; DRUGS; ERYTHROCYTES; METABOLISM; METABOLITES; NEUROLOGIC MANIFESTATIONS	Stegink, L.D. Filer, L.J., Jr. Baker, G.L. McDonnell, J.E. 1979
2990 Blood, plasma	Ingestion	CC	a) 8 b) 12	a) 0.3-0.5 umoles/100 ml b) 0.3-0.8 umoles/100 ml c) 6.2-16 umoles/100 ml d) 5.5-11.1 umoles/100 ml	a) Not given b) Not given c) Not given d) Not given	a) Range of means, 0 and 8 hr after 34 mg/kg to normal subjects, measured as metabolite, aspartate b) Range of means, 0 and 8 hr after 34 mg/kg to phenylketonurics, measured as metabolite, aspartate c) Range of means, 0 and 8 hr after 34 mg/kg to normal subjects, measured as metabolite, phenylalanine d) Range of means, 0 and 8 hr after 34 mg/kg to phenylketonurics, measured as metabolite, phenylalanine. Estimated from graph. Adults, 8 female heterzygotes for phenylketonuria, 6 normal females, 6 normal males. Data show no detriment to PKU homozygous fetus with long-term maternal levels of < 10 mg/100 ml (60 umoles/100 ml). AMINO ACIDS; IONA; SWEETENING AGENTS; ADULTS; BLOOD PLASMA; BLOOD; COMPARATIVE EVALUATIONS; DRUGS; ERYTHROCYTES; METABOLISM; METABOLITES; NEUROLOGIC MANIFESTATIONS	Stegink, L.D. Filer, L.J., Jr. Baker, G.L. McDonnell, J.E. 1979

Succinic acid, mercapto-, diethyl ester, S-ester with O,O-dimethyl phosphorodithioate (8 CI)
Butanedioic acid, ((dimethoxyphosphinothioyl)thio)-, diethyl ester (9 CI)
121-75-5
C10-H19-O6-P-S2
MW 330.36, MP 2.9 C, BP 156-57 C at 0.7 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2991 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 98.2% b) 8.2%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974
2992 Urine		GC	10	889-1072 ng/ml	635 ng/ml	10 of 14 workers studied. Other 4 workers and 9 non-exposed workers had undetectable levels (<20 pg/ml). Values for metabolites. Workers in production of pesticides containing malathion. Blood cholinesterase activity inversely related to urine malathion residues in 3 workers studied. PESTICIDE RESIDUES; YUGOSLAVIA; URINE; ORGANOPHOSPHATES; OCCUPATIONAL HAZARDS; COMPARATIVE EVALUATIONS	Drevenkar, V. Frobe, Z. Vasilic, Z. Tkalcevic, B. 1979

Sulfanilamide, N(1)-(4,6-dimethyl-2-pyrimidinyl)- (8 CI)
Benzenesulfonamide, 4-amino-N-(4,6-dimethyl-2-pyrimidinyl)- (9 CI)
57-68-1
C12-H14-N4-O2-S
MW 278.32, MP 176 C (also reported: 178-179 C, 198-199 C, 205-207 C)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2993 Blood, plasma	Ingestion	Colorimetry Fluorometry	a) 1 b) 1 c) 1	a) 100-44 ug/ml b) 100-16 ug/ml c) 100-1 ug/ml	a) Not applicable b) Not applicable c) Not applicable	a) Slow (rr genotype) b) Intermediate (Rr genotype) c) Fast (RR genotype) Values are 0-8 hr levels, unchanged drug, for acetylator phenotypes after 20 mg/kg dose. Estimates from graphs. Data also given for acetylated metabolite and kinetics in all 19 subjects. 19 healthy adults ages 17-46 yr, female, male, white, oriental, black. No medication > 24 hr before study. Fasted before and after dose. DRUGS; METABOLISM; GENETIC EFFECTS; BLOOD PLASMA; ADULTS; URINE; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Chapron, D.J. Kramer, P.A. Merick, S.A. 1980
2994 Urine	Ingestion	GC	a) 8 b) 11 c) 8	a) Not given b) Not given c) Not given	a) 65.6% of absorbed dose b) 87.7% of absorbed dose c) 93.7% of absorbed dose	a) Slow (rr genotype) b) Intermediate (Rr genotype) c) Fast (RR genotype) Values are for acetylated metabolism in 72-hr for acetylator phenotypes. 19 healthy adults ages 17-46 yr, female, male, white, oriental, black. No medication > 24 hr before study. Fasted overnight and for 3 hr after dose. DRUGS; METABOLISM; GENETIC EFFECTS; BLOOD PLASMA; ADULTS; URINE; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Chapron, D.J. Kramer, P.A. Merick, S.A. 1980

Sulfanilamide, N(1)-(5-methyl-3-isoxazolyl)- (8 CI)
Benzenesulfonamide, 4-amino-N-(5-methyl-3-isoxazolyl)- (9 CI)
723-46-6
C10-H11-N3-O3-S
MW 253.31, MP 167 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2995 Blood, serum	Ingestion			37-189 ug/ml	Not applicable	Range of means 2 hr after dose, day 1 and 9. 115 ug/ml on day 12, end of trial. Dose, 20 mg/kg/day of trimethoprim with 100 mg/kg/day sulfamethoxazole at 6-hr intervals. Estimated from graph. Number of cases varied daily from 5-20 depending on response to therapy. Children with pneumocystis carinii pneumonitis, receiving immunosuppressive therapy for malignancy. Some on antibiotics. Vomiting or urticarial rash in 4 patients. DRUGS; DRUG THERAPY; INFECTION; CHILDREN; NEOPLASMS; TENNESSEE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Hughes, W.T. Feldman, S. Chaudhary, S.C. Ossi, M.J. Cox, F. Sanyal, S.K. 1978

Sulfanilamide, N(1)-2-pyridyl- (8 CI)
Benzenesulfonamide, 4-amino-N-2-pyridinyl- (9 CI)
144-83-2
C11-H11-N3-O2-S
MW 249.29, MP 191-193 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2996 Blood, plasma	Ingestion	Colorimetry	4	a) 6.26-18.6 ug/ml b) 4.15-9.34 ug/ml	a) 13.3 + or - 2.6 ug/ml b) 6.84 + or - 1.1 ug/ml	a) Peak, 2 g sulfasalazine in uncoated tablets. Peak time 14 hr b) Peak, 2 g sulfasalazine in enteric-coated tablets. Peak at 19.5 hr Bioavailability of drug from enteric-coated 66% of uncoated. 4 healthy males, ages 21-31. DRUGS; DRUG THERAPY; ADULTS; NEW YORK; COMPARATIVE EVALUATIONS; BLOOD PLASMA; GASTROINTESTINAL SYSTEM; METABOLITES	Pieniaszek, H.J. Remetarits, D.E. Wilferth, W.W. Blumenthal, H.P. Bates, T.R. 1979
2997 Blood, plasma	Ingestion	Colorimetry	5	a) Not applicable b) Not applicable c) 15-85 ug/ml	a) 68 ug/ml b) 58 ug/ml c) 42.8 ug/ml	a) Peak at 12 hr after dose, before surgical removal of jejunal diverticulae b) Peak at 19 hr after dose, 6 mo after surgical removal of diverticulae c) Peaks at 15-24 hr, controls All subjects dosed with 2.0 g sulfasalazine. 4 healthy Thais, ages 28-46 yr, fasted 8-10 hr before dose. 1 63-yr-old male patient with blind-loop syndrome. THAILAND; URINE; BLOOD PLASMA; METABOLITES; METABOLISM; COMPARATIVE EVALUATIONS; ADULTS; DISEASES	Thithapandha, A. 1978
2998 Urine	Ingestion		6	50.3-67.9% of dose	60.8% of dose	Cumulative 4-day excretion of free plus acetylated and/or conjugated sulfapyridine after 2.0 g sulfasalazine. Peak excretion, 24-48 hr in normals, 12-24 hr in blind-loop patients. 4 healthy Thais, ages 28-46 yr, fasted 8-10 hr before dosing. 2 patients, ages 63 and 70 yr, with blind-loop syndrome. THAILAND; URINE; BLOOD PLASMA; METABOLITES; METABOLISM; COMPARATIVE EVALUATIONS; ADULTS; DISEASES	Thithapandha, A. 1978

Sulfanilamide, N(1)-2-pyrimidinyl- (8 CI)
Benzenesulfonamide, 4-amino-N-2-pyrimidinyl- (9 CI)
68-35-9
C10-H10-N4-O2-S
MW 250.28, MP 252-256 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
2999 Blood, plasma	Ingestion		a) 16 b) 16 c) 8 d) 8 e) 8 f) 8	a) 0.9-19.3 ug/ml b) 0.9-18.2 ug/ml c) 1.4-17.7 ug/ml d) 1.3-17.4 ug/ml e) 1.3-19.0 ug/ml f) 1.3-18.9 ug/ml	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) Oral solution b) Suspension (Eli Lilly) c) Tablets (Eli Lilly) d) Tablets (Lederle) e) Tablets (Stanlabs) f) Tablets (Richlyn) Doses, 500 mg. Peaks at 2.9-4.5 hr. No differences in bioavailability. Normal adults (20-30 yr old, 66.8-93.2 kg). DRUGS; COMPARATIVE EVALUATIONS; ANTIBIOTICS; BLOOD PLASMA	Meyer, M.C. Straughn, A.B. Ramachander, G. Cavagnol, J.C. Mabadeje, A.F.B. 1978

Sulfur
7704-34-9
S
Atw 32.064, MP 115.21 C, BP about 444.6 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3000 Nail		NA	a) 50 b) 50 c) 34 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 3.6% b) 3.9% c) 3.5% d) 3.9%	a) Fathers b) Mothers c) Male teenagers d) Female teenagers 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schaaschula, P.G. 1976

Sulfuric acid magnesium salt (1:1), compd. with 2,2'-dithiobis(pyridine) 1,1'-dioxide (1:1)
43143-11-9
C10-H8-N2-O2-S2.H2-O4-S.Mg
MW 374

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3001 Blood, plasma	Injection		4-6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 4 ng/ml b) 0.05 ng/ml c) 0.01 ng/ml d) 0.003 ng/ml e) 0.01 ng/ml f) 0	a) 15 min b) 4 hr c) 24 hr d) 48 hr e) 96 hr f) 120 hr Profile based on change in radioactivity at times after a C-14 labelled 1 uCi dose of magnesium sulfate adduct of the drug. DRUGS; BLOOD PLASMA; URINE	Wedig, J.H. Feldmann, R.J. Maibach, H.I. 1977
3002 Urine	Injection Dermal	Radiometry	5-6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 59.3% b) 3.2% c) 11.2% d) 15.3% e) 6.2% f) 13.2%	a) Intravenous injection b) Topical administration (ventral forearm) of 12 ug/cm2 c) Topical administration (forehead) of 12 ug/cm2 d) Topical administration (forehead) of 40 ug/cm2 e) Topical administration (scalp) of 12 ug/cm2 f) Topical adminstration (scalp) of 40 ug/cm2 Percentage of dose excreted in 120 hr. DRUGS; BLOOD PLASMA; URINE	Wedig, J.H. Feldmann, R.J. Maibach, H.I. 1977

Technetium, isotope of mass 99
14133-76-7
Tc
AtW 98.9062, MP about 2250 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3003 Milk	Injection	Radiometry	1	a) 1 x 10(E+6) cpm [1.04 uCi]/4 ml b) 1.96 x 10(E+2) cpm [2.04 x 10(E-4) uCi]/4 ml	a) Not given b) Not given	a) Peak 7 hr after administration b) 48 hr after administration (slightly above background) 1.9 x 10(E+10) cpm (or 20 uCi) injected. Specific activity not given. Data available for intermediate time points. 29 yr old lactating mother, 7 wk postpartum. LACTATION; MILK; METALS; TECHNETIUM; RADIOISOTOPES; OHIO	Pittard, W.B. Bill, K. Fletcher, B.D. 1979

Thallium
7440-28-0
Tl
Atw 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3004 Adipose		MS	1			Aged 73 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3005 Adrenal gland		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3006 Aorta		MS	1			Aged 73 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3007 Bladder		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3008 Blood			1	Not applicable	40 ug/l	2.5 yr old. Urine peak 3900 ug/l. No neurological symptoms. Hair fell out. THALLIUM; URINE; BLOOD; CHILDREN; GERMANY; METALS; METAL POISONING	Von Muehlendahl, K.E. Etzold, H. Krienke, E.G. 1978

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3009 Blood		Electrochem AAS MS				Blood and blood serum. Juveniles and adults. Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3010 Bone		MS	8			Ribs, cranial roof, thigh compacta. Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3011 Brain		MS	5			Cerebrum, cerebellum, medulla oblongata, corpus striatum, choroid plexus, nucleus ruber, nucleus niger, internal capsule. Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3012 Cartilage		MS	2			Epiglottis, meniscus, and rib cartilage. Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3013 Gall bladder		NS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3014 Gum		NS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3015 Hair		NS Colorimetry	16			Review THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3016 Heart		NS	1			Suicide. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
Atw 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3017 Intestine		MS	8			Duodenum, small intestine, colon, rectum. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3018 Kidney		MS				Medulla and cortex. Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3019 Ligament		MS	1			Ligamentum nuchae. Aged 73 yr. Review THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3020 Liver		AAS MS	20			Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3021 Lung		MS	8			Review THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3022 Lymph node		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3023 Muscle		MS	8			Skeletal and heart muscles. Atrio-ventricular node. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3024 Nail		MS	15			Finger- and toenails. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3025 Ovary		MS	1			Aged 73 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3026 Pancreas		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3027 Pineal gland		MS	1			Aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3028 Pituitary		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3029 Prostate		MS	1			Aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3030 Salivary gland		MS	2			Parotid gland. Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3031 Skin		MS	4			Review THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3032 Spleen						Normal and poisoning cases. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
At# 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3033 Stomach		MS	2			Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3034 Teeth		MS				Whole tooth and enamel. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3035 Tendon		MS	2			Achilles tendon. Female aged 73 yr, and male aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3036 Testis		MS	1			Testicles and epididymis. Aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

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Thallium
7440-28-0
Tl
AtW 204.37, MP 303.5 C, BP 1457 C, VP 1 mm Hg at 825 C, 10 mm Hg at 1000 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3037 Thyroid gland		MS	1			Aged 16 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3038 Urine	Ingestion		a) 11 b) 2 c) 1	a) <20-500 ug/l b) 130-3900 ug/l c) Not applicable	a) 45 ug/l b) Not given c) 19300 ug/l	a) Symptomless. Mean value is median b) Peaks, children with symptoms c) Death due to Tl Children brought to clinic for treatment of Tl poisoning. Most aged 1-4 yr. Most showed no symptoms. 1 lost hair, 1 lost Achilles tendon and patellar reflexes. THALLIUM; URINE; BLOOD; CHILDREN; GERMANY; METALS; METAL POISONING	Von Muehlendahl, K.E. Etzold, H. Krienke, E.G. 1978
3039 Urine		MS Colorimetry AAS				Normal and poisoning cases. Juveniles and adults. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977
3040 Uterus		MS	1			Aged 73 yr. Review. THALLIUM; METALS; STOMACH; PROSTATE; TESTES; UTERUS; OVARIES; LYMPH NODES; SALIVARY GLANDS; THYROID GLANDS; ADRENAL GLANDS; PANCREAS; PINEAL GLAND; PITUITARY GLAND; AORTA; BLADDER; GALL BLADDER; GUMS; CARTILAGE; TENDONS; LIGAMENTS; BONES; SKIN; HAIR; NAILS; INTESTINES; LUNGS; MUSCLES; SPLEEN; HEART; BRAIN; KIDNEYS; URINE; TEETH; LIVER; BLOOD; BLOOD SERUM; ADIPOSE TISSUE; REVIEW; AUTOPSIES	Carson, B.L. Smith, I.C. 1977

Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MW 180.17, MP 270-274 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3041 Blood, plasma	Ingestion	HPLC	a) 6 b) 6 c) 6 d) 6	a) 1.5-7.5 ug/l b) 8.0-19.0 ug/l c) Not given d) 3.0-18.0 ug/l	a) 8.6 ug/l b) 10.7 ug/l c) <0.5 ug/l d) 9.0 ug/l	a) Day 1 of treatment-infants b) Peak means after 0.5-2 mg/kg/6 hr, adjusted for plasma levels-infants c) Before treatments-infants d) Peak means after treatment, adults, 400 mg/day Theophylline & caffeine correlated in infants. Theophylline cleared 3 days after last dose, caffeine persisted > 9 days. 7 premature infants, gestational ages 26-33 wk, treated with theophylline for apnea. 6 adults, ages 20-25 yr. FRANCE; CANADA; THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; ADULTS; BLOOD; BLOOD PLASMA; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE; UMBILICAL CORD	Bory, C. Baltassat, P. Porthault, M. Bethenod, M. Frederich, A. Aranda, J.V. 1979
3042 Blood, plasma	Injection	HPLC	3	a) 8.16-2.99 ug/ml b) 3.02-1.66 ug/ml	a) Not given b) Not given	a) Arterial blood, 0 and 3 hr of hemodialysis after infusion of 250 mg aminophylline b) Venous blood, 0.25 and 3 hr of hemodialysis after infusion of 250 mg aminophylline Clearance 88.1 ml/min 3 uremic patients on chronic hemodialysis, either anephric or with end-stage renal failure. DRUGS; DRUG THERAPY; ADULTS; THEOPHYLLINES; FLORIDA; BLOOD PLASMA; DIURETICS	Ching, S.L. Marbury, T.C. Perrin, J.H. Fuller, T.J. 1979
3043 Blood, plasma	Ingestion	GC	37	a) 0-4.3 ug/ml b) 4.0-42.8 ug/ml	a) 1.24 + or - 1.05 ug/ml b) 12.0 + or - 7.1 ug/ml	a) Before treatment, 21 cases b) Mean peaks after 2.4-8.9 mg/kg/day for average of 103.1 hr Effects on secondary apnea not significant. 37 infants with apnea, born before 37 wk gestation. Toxicity developed in 12: tachycardia (2), regurgitation or GI bleeding (9), convulsions (2). THEOPHYLLINES; DRUGS; DRUG THERAPY; INFANTS; FRANCE; BLOOD PLASMA; COMPARATIVE EVALUATIONS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; CAFFEINE	Boutroy, M.J. Vert, P. Royer, P.J. Monin, P. Royer-Morrot, M.J. 1979

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Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MW 180.17, MF 270-274 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3044 Blood, serum	Ingestion Injection	Immunoenzymatic	4	a) 11-13 ug/ml b) 12-13 ug/ml c) 1-2.5 ug/ml d) 11-12 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Mothers at delivery b) Neonates 6 hr after delivery c) Neonates 40 hr after delivery d) Umbilical cords at delivery Mothers received infusions of 0.9 mg/kg/hr for 9 or 28 hr before delivery. Mothers had records of prior treatment with drug Placental transfer Black women, 30 and 22 yr old, with histories of respiratory disorders and their infants. The slight fetal tachycardia noted during labor and delivery in case 1 and the jitters in case 2 could have resulted from theophylline toxicity. DRUGS; DRUG THERAPY; THEOPHYLLINES; BLOOD SERUM; ADULTS; NEWBORN; UMBILICAL CORD; PREGNANCY; OHIO	Atwood, L.L. Dasta, J.F. Friedman, C. 1979
3045 Blood, serum	Ingestion	HPLC	a) 13	a) 0-3.18 ug/ml b) 0-3.23 ug/ml c) 0.2-9.1 ug/ml d) 0-9.82 ug/ml	a) 0.6 + or - 0.9 ug/ml b) 0.5 + or - 0.9 ug/ml 3.6 + or - 2.5 ug/ml d) 2.5 + or - 2.2 ug/ml	a) Infants, < 30 wk gestational age, caffeine 10 mg/kg/day b) Infants, 30-33 wk gestational age, caffeine 10 mg/kg/day c) Infants, < 30 wk gestational age, theophylline 2 mg/kg/day d) Infants, 30-33 wk gestational age, theophylline 2 mg/kg/day Interconversion as much as 100%. Infants receiving methylxanthine therapy for apnea. Weight < 2,000 g when born at < 33 wks gestation. INFANTS; DRUGS; DRUG THERAPY; BLOOD SERUM; ILLINOIS; COMPARATIVE EVALUATIONS; LUNGS; METABOLITES; NEWBORN; NEUROMUSCULAR DISEASES; THEOPHYLLINES; CAFFEINE	Bada, H.S. Khanna, N.N. Somani, S.M. Tin, A.A. 1979
3046 Blood, serum	Injection	HPLC	5	a) 12.3-17.9 ug/ml b) 3.3-13.2 ug/ml	a) 15.5 ug/ml b) 9.9 ug/ml	a) Peaks after 7.7 + or - 0.4 mg/kg b) Peaks after 7.7 + or - 0.4 mg/kg followed by activated charcoal Peaks in 1-3 hr without and 0.3-1.5 hr with charcoal. 4 men, 1 woman, healthy, ages 25-33 yr. THEOPHYLLINES; DRUGS; IOWA; BLOOD SERUM; DRUG THERAPY; ADULTS	Sintek, C. Hendeles, L. Weinberger, M. 1979

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Theophylline (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl- (9 CI)
58-55-9
C7-H8-N4-O2
MW 180.17, MP 270-274 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3047 Blood, serum	Injection Ingestion	HPLC	6	a) 8.85-17.227 ug/ml b) 3.11-8.91 ug/ml	a) 12.818 + or - 3.04 ug/ml b) 5.85 + or - 2.12 ug/ml	a) Extrapolated 0-time values, corrected to IV bolus, after 1.8-4.2 mg/kg IV. Biexponential decline (5 subjects) b) Peaks after 3.2-4.2 mg/kg in tablets. Fasting to 5 hr. Peaks at 1.12-2.84 hr (6 subjects). Patients 31-73 yr old, with normal renal, hepatic, and pulmonary functions. All had cerebral dysfunctions of ischemic/vascular origin. Nausea in 2 after oral dose. Modest improvement of dysarthria in 1 after IV dose. Slight temporary improvement of spastic paraparesis in 1 after IV dose. THEOPHYLLINES; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS; DENMARK; CARDIOVASCULAR DISEASES	Nielsen-Kudsk, F. Magnussen, I. Staehelin Jensen, T. Maeser, K. 1980
3048 Blood, serum	Ingestion	HPLC	14	a) 6.6-15.0 ug/ml b) 5.0-13.6 ug/ml c) 6.1-18.5 ug/ml d) 4.1-15.7 ug/ml	a) 11.1 ug/ml b) 9.6 ug/ml c) 13.8 ug/ml d) 10.7 ug/ml	a) AM, 6 hr after 1.725-4.55 mg/kg as aminophylline solution b) PM, 6 hr after 1.728-4.55 mg/kg as aminophylline solution c) AM, 12 hr after 3.45-9.1 mg/kg as theophylline, controlled-release capsule d) PM, 12 hr after 3.45-9.1 mg/kg as theophylline, controlled-release capsule Significant difference between AM and PM troughs. Non-smokers, ages 21-40, no alcoholism or cardiovascular disease. DRUGS; MUSCLE RELAXANTS; THEOPHYLLINES; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS	Lesko, L.J. Brousseau, D. Canada, A.T. Eastwood, G. 1980

Theophylline, compd. with ethylenediamine (2:1) (8 CI)
1H-Purine-2,6-dione, 3,7-dihydro-1,3-dimethyl-, compd. with 1,2-ethanediamine (2:1) (9 CI)
317-34-0
C7-H8-N4-O2.1/2C2-H8-N2
MW 420.44, MP 276-278 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3089 Blood, plasma	Injection	HPLC	9	2.0-10.0 ug/ml	Not given	Levels at end of dosing interval during first 2 days of treatment-initial dose of 5 mg/kg body wt followed by 1.2 mg/kg every 8 hr. Caffeine levels reported for 4 cases (< 1.0-2.0 ug/ml) Subjects, 26-32 wk gestational age and weighing 840-1,200 gm at birth. Treated for apnea and bradycardia associated with cyanosis. DRUGS; DRUG THERAPY; BLOOD PLASMA; INFANTS; NEWBORN; NEW YORK	Dietrich, J. Krauss, A.N. Heidenburg, M. Drayer, D.E. Auld, P.A.M. 1978
3050 Blood, serum						Review Side effects given for various serum levels. THEOPHYLLINES; REVIEW; MUSCLE RELAXANTS	Mancini, R.E. 1980

Theophylline, 7-(2,3-dihydroxypropyl)- (8 CI)
1H-Purine-2,6-dione, 7-(2,3-dihydroxypropyl)-3,7-dihydro-1,3-dimethyl- (9 CI)
479-18-5
C10-H14-N4-O4
MW 254.25, MP 158 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3051 Blood, serum	Ingestion	HPLC	5	24.36-1.64 ug/ml	Not applicable	Range of means 0.75-8 hr after 19-28 mg/kg. Initial value, 3.28 ug/ml at 0.5 hr. Nonoexponential elisination. 20-25 yr-old, healthy, nonobese, non-smokers, not taking medications and abstaining from methylxanthine-containing food for 15 hr before. Fasted. One had severe headache associated with peak serum level of 36.4 ug/ml. DRUGS; THEOPHYLLINES; ADULTS; CANADA; METABOLISM; BLOOD SERUM	Simons, K.J. Simons, F.E.R. 1979

Thiamine (8 CI)
Thiazolium, 3-((4-amino-2-methyl-5-pyrimidinyl)methyl-5-(2-hydroxyethyl)-4-m-ethyl- chloride (9 CI)
59-43-8
C12-H17-N4-O-S.Cl
MW 300, MP Hydrochloride 248 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3052 Urine			187	a) Not given b) Not given	a) 951 ug/g creatinine b) 1781 ug/g creatinine	a) Men b) Women Criteria for low levels < 66 ug/g creatinine. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978

Thiazole, 5-(2-chloroethyl)-4-methyl-
533-45-9
C6-H8-Cl-N-S
MW 161.66, MP 232 C, BP 92 C at 7 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3053 Blood, plasma	Ingestion Injection	MS	a) 3 b) 3 c) 3 d) 3	a) 0.59-0.007 ug/ml b) 7.14-0.022 ug/ml c) 4.16-7.78 ug/ml d) 4.23-31.5 ug/ml	a) Not applicable b) Not applicable c) 6.25 ug/ml d) 15.15 ug/ml	a) 0.5 and 10 hr after 384 mg, oral b) 0.5 and 10 hr after 768 mg, oral c) Peaks, 0.17 and 0.55 hr after 0.32-0.45 mg/kg/min d) Peaks, 0.17 hr and 0.42 hr postinfusion. Dose, 0.71-0.82 mg/kg/min. Patients with mild alcohol withdrawal syndrome, ages 18-60 yr, without severe hepatic, renal, or cardiac dysfunction. Sedative effects up to 4 hr after dosing. DRUGS; SEDATIVES; HYPNOTICS; ANTICONVULSANTS; BLOOD PLASMA; ADULTS; ALCOHOLIC BEVERAGES; COMPARATIVE EVALUATIONS; DRUG THERAPY	Jostell, K.G. Agurell, S. Hollister, L.E. Wermuth, B. 1978
3054 Blood, plasma	Ingestion	GC	16	a) 7-36 mg/l b) 3-36 mg/l	a) Not given b) Not given	a) Highest recorded levels-unconscious patients b) Highest recorded levels-all patients Alcohol taken in 6 cases, other drugs in 3 cases. 22-84 yr old patients admitted to hospital after overdose. 4 were taking drug as a hypnotic, 3 had taken tablets belonging to relatives, 6 were alcoholics, admitted 1-18 hr after ingestion. Deep coma, respiratory depression, hypothermia, hypotension, pneumonia. DRUGS; HYPNOTICS; DRUG ABUSE; ALCOHOLS; BLOOD PLASMA; CASE HISTORIES; SCOTLAND	Illingworth, R.N. Stewart, M.J. Jarvie, D.R. 1979

Thiocyanic acid, ion(1-) (8 CI)
Thiocyanate (9 CI)
302-04-5
C-N-S
MW 58.08

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3055 Blood, serum		Colorimetry	a) 8 b) 8	a) 7.5-27.5 mg/l b) 2.5-8 mg/l	a) Not given b) Not given	a) Smokers, >1 pack/day 1 yr b) Nonsmokers >3 yr Estimated from graph. Adults, ages 21 to 39 yr, none on medication 30 days prior to study, free of neuro-, cardiovascular, hepatic, and renal abnormalities. ANTICONVULSANTS; BLOOD SERUM; NEW YORK; SEX; THIOCYANATES; SMOKING; COMPARATIVE EVALUATIONS; DRUGS; DRUG THERAPY; PROTEINS; TOBACCOS; ADULTS	Rose, J.Q. Barron, S.A. Jusko, W.J. 1978

Thioether (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3056 Urine		Colorimetry	a) 16 b) 3 c) 20 d) 4 e) 2 f) 2	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 37 umol/mmol creatinine b) 52 umol/mmol creatinine c) 30 umol/mmol creatinine d) 73 umol/mmol creatinine e) 52 umol/mmol creatinine f) 71 umol/mmol creatinine	a) Female clerks - non-smokers without medication b) Female clerks - smokers with medication c) Male clerks - non-smokers without medication d) Female tire builders - radial group, with medication e) Male rubber workers - non-smokers with medication f) Male rubber workers - smokers with medication Urine of employees in Finnish chemical factory. URINE; OCCUPATIONAL HAZARDS; SMOKING; FINLAND; SEX	Vainio, H. Savolainen, H. Kilpikari, I. 1978

Thioxanthene-delta(9, gamma)-propylamine, 2-chloro-N,N-dimethyl-, (Z)- (9 CI)
1-Propanamine, 3-(2-chloro-9H-thioxanthen-9-ylidene)-N,N-dimethyl-, (E)- (9 CI)
113-59-7
C18-H18-Cl-N-S
MW 315.9, MP 94-95 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3057 Blood	Injection Ingestion	Fluorometry	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 50 ng/ml b) 3 ng/ml c) 12 ng/ml d) 1.3 ng/ml	a) 0.5 hr, intravenous b) 24 hr, intravenous c) 4 hr (peak), oral d) 24 hr, oral. Values decreased steadly from high value. Values estimated from graph. Pharmacokinetic profile and bioavailability data given. Healthy adult DRUGS; BLOOD; SWITZERLAND; ADULTS	Raaflaub, J. 1975

Tin
7440-31-5
Sn
AtW 118.69, MP 231.9 C, BP 2507 C, VP 1 mm Hg at 1610 C, 10 mm Hg at 1890 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3058 Hair		ES	a) 126 b) 90 c) 71 d) 179 e) 108 f) 102 g) 109	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.54 ug/g b) 0.44 ug/g c) 0.83 ug/g d) 0.47 ug/g e) 0.77 ug/g f) 0.54 ug/g g) 1.17 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children d) Male children e) Female children f) Male adults g) Female adults Correlations between Sn and the following: dust, sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
3059 Kidney		X-ray fluores	a) 18 b) 8 c) 12	a) Not given b) Not given c) Not given	a) <1.5 ug/g dry wt b) 1.9 ug/g dry wt c) 2.1 ug/g dry wt	a) Controls b) Nondialyzed uremic c) Dialyzed uremic Samples from autopsies and end-stage kidneys removed at transplant. TIN; METALS; LIVER; KIDNEYS; URINE; DISEASES; COLORADO; AUSTRALIA; TEXAS; CONNECTICUT	Nunnelley, L.L. Smythe, W.R. Alfrey, A.C. Ibels, L.S. 1978
3060 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.03 ppm (31%) b) 1.03 ppm (44%) c) 1.46 ppm (55%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels as indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
3061 Liver		X-ray fluores	a) 36 b) 13 c) 31	a) Not given b) Not given c) Not given	a) 2.9 ug/g dry wt b) 6.6 ug/g dry wt c) 17.1 ug/g dry wt	a) Controls b) Nondialyzed uremic c) Uremic, dialyzed 3-80 mo Autopsy samples. 50 samples from CO, 14 from Brisbane, Australia, 7 from CT, 1 from TX. TIN; METALS; LIVER; KIDNEYS; URINE; DISEASES; COLORADO; AUSTRALIA; TEXAS; CONNECTICUT	Nunnelley, L.L. Smythe, W.R. Alfrey, A.C. Ibels, L.S. 1978

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Tin
7440-31-5
Sn
Atw 118.69, MP 231.9 C, BP 2507 C, VP 1 mm Hg at 1610 C, 10 mm Hg at 1890 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3062 Liver		ES		a) Not given b) Not given c) Not given	a) 1.83 ppm (66%) b) 1.69 ppm (70%) c) 2.53 ppm (86%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
3063 Lung		ES	30	Not detectable-393.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, H.G. Wolowicz, P.E. Knott, H.J. Holtz, J.L. Gorski, C.H. 1967
3064 Spleen		ES		a) Not given b) Not given c) Not given	a) 1.19 ppm (85%) b) 1.07 ppm (61%) c) 1.22 ppm (70%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
3065 Urine		X-ray fluores	a) 9 b) 8	a) 2-29 ug/l b) 3-31 ug/l	a) 15 ug/l b) 15 ug/l	a) Controls b) Hondialyzed uremic 6 male, 3 female controls. 7 male, 1 female uremics. Ages 20-65 yr. TIN; METALS; LIVER; KIDNEYS; URINE; DISEASES; COLORADO; AUSTRALIA; TEXAS; CONNECTICUT	Hunnelley, L.L. Smythe, W.R. Alfrey, A.C. Ibels, L.S. 1978

Titanium
7440-32-6
Ti
Atw 47.90, MP 1677 C, BP 3277 C, VP 1 mm Hg at 2180 C, 10 mm Hg at 2880 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3066 Hair		NA	11	21.1-33.9 ppm	26.7 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, M. 1977
3067 Kidney		ES		a) Not given b) Not given c) Not given	a) 1.44 ppm (8%) b) 1.52 ppm (10%) c) 1.31 ppm (10%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
3068 Liver		ES		a) Not given b) Not given c) Not given	a) 3.09 ppm (4%) b) 1.24 ppm (2%) c) 1.95 ppm (6%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1974
3069 Lung		ES	30	36.5-393.0 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, P.B. Knott, M.J. Holtz, J.L. Gorski, C.H. 1967

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Titanium
7440-32-6
Ti
AtW 47.90, MP 1677 C, BP 3277 C, VP 1 mm Hg at 2180 C, 10 mm Hg at 2480 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3070 Lung		ES	20	Not given	158 mg/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
3071 Lung		ES	a) 129 b) 15	a) 26-158 ug/g dry wt b) Not given	a) 98 ug/g dry wt b) 22 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
3072 Lung		ES	134	90-158 ug/g dry wt	115 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Lintiaca, L.P. Norris, H.B. Holtz, J.L. Mauer, P. Wolowicz, F.R. 1971
3073 Lymph node		ES	14	Not given	137.0 mg/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971

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Titanium
7440-32-6
Ti
Atw 47.90, MP 1677 C, BP 3277 C, VP 1 mm Hg at 2190 C, 10 mm Hg at 2480 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3074 Spleen		ES		a) Not given b) Not given c) Not given	a) 1.8% ppm (11%) b) 2.9% ppm (9%) c) 1.9% ppm (9%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapranit, S. Alexander, G.V. Gonick, H.C. 1974

Tocopherol
1406-66-2
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3075 Blood, plasma	Ingestion		a) 8 b) 14 c) 14	a) 0.339-1.15 mg/dl b) 0.258-2.116 mg/dl c) 0.250-0.754 mg/dl	a) Not applicable b) Not applicable c) Not applicable	a) Change 0-96 hr, 25 units of dl-alpha tocopherol or its acetate ester at 1 and 48 hr. Age less than 1 wk b) Initial and peak, 25 mg/day for 6 wk. Peak, wk 2 c) Initial and peak, placebo for 6 wk. Peak, wk 3. Premature infants. VITAMINS; NEWBORN; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; INFANTS; DIETS; NUTRITIONAL DEFICIENCIES; NUTRITIONAL DISORDERS	Bell, E.F. Brown, E.J. Milner, R. Sinclair, J.C. Zepurnky, A. 1979
3076 Milk			8	0.22-0.50 mg/dl	Not given	6 samples of breast milk Mothers of premature infants VITAMINS; NEWBORN; BLOOD PLASMA; MILK; COMPARATIVE EVALUATIONS; INFANTS; DIETS; NUTRITIONAL DEFICIENCIES; NUTRITIONAL DISORDERS	Bell, E.F. Brown, E.J. Milner, R. Sinclair, J.C. Zepurnky, A. 1979

Toluene-alpha,2-diamine, 3,5-dibromo-N(alpha)-cyclohexyl-N(alpha)-methyl- (8 CI)
Benzenemethanamine, 2-amino-3,5-dibromo-N-cyclohexyl-N-methyl- (9 CI)
2572-83-8
C14-H20-Br2-N2
MW 296.26

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3077 Blood, plasma	Ingestion	GC-EC	1	68-1.15 ug/ml	Not given	Volunteer, 2-10 hr after 20-mg dose. DRUGS; BLOOD PLASMA; MEASUREMENT METHODS; BELGIUM	De Leenheer, A.P. Vandecasteele-Thienpont , L.S.P. 1980

Toluene-2-sulphonamide (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3078 Urine	Ingestion	GC	a) 2 b) 1	a) 97-100% b) Not given	a) Not given b) 88%	a) Cumulative percent of 14 mg (0.2 mg/kg) excreted after 4 days as original + metabolites b) Cumulative percent of 30 mg (0.4 mg/kg) excreted after 7 days as original compound and metabolites. DRUGS; METABOLITES; URINE; UNITED KINGDOM	Renwick, A.G. Ball, L.M. Corina, D.L. Williams, R.T. 1978

Total BRC (No postage in CHEMLINE).
MW 290.85

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3079 Milk		GC TLC	a) 50 b) 15 c) 6	a) 1.7-45.5 ppb b) Not given c) Not given	a) 9.44 ppb b) 12.8 ppb c) 6.8 ppb	a) All samples b) Colostrum c) 9-16 wk after birth of infant Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Selp, M. 1976
3080 Milk		GC	1 of 51	Not given	0.003 ppm	Random subjects of greater St. Louis, MO, metropolitan area. Values are total of alpha, beta, and delta lindane. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbruster, J. Kettelhut, L.L. Drucker, B. 1977
3081 Milk		GC	a) 27 b) 9 c) 10 d) 40	a) 0-0.019 ppm b) 0-0.057 ppm c) 0.010-0.035 ppm d) 0.001-0.040 ppm	a) 0.006 ppm b) 0.015 ppm c) 0.024 ppm d) 0.012 ppm	a) Cotton, corn, and sesame-growing area b) Corn and cotton area c) Corn area d) Coffee-growing area, El Salvador a)-c) in Guatemala. Highest use of pesticides on cotton. Mothers from low-income families in Guatemala and El Salvador, areas chosen to represent different degrees of use of pesticides. Overuse of pesticides a particular problem in tropical countries. Prevalence of malnutrition may contribute to health effects. AGRICULTURE; CHLORINE ORGANIC COMPOUNDS; CROP DUSTING; DDT; DIELDRIN; EL SALVADOR; FOOD CONTAMINATION; GUATEMALA; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; INSECTICIDES; MILK; NUTRITIONAL DEFICIENCIES; PESTICIDES; PESTICIDE RESIDUES	de Campos, M. Olszyna-Marzys, A.E. 1979

Total DDT (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3082 Adipose		GC-EC	a) 1412 b) 898	a) < or = 270.05 ppm b) < or = 89.06 ppm	a) 7.88 ppm b) 4.99 ppm	a) FY 1970 b) FY 1974 Concentration on lipid basis. Postmortems and biopsies throughout U.S. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; UNITED STATES	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3083 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 23.04 ppm b) 29.29 ppm c) 23.04 ppm d) 23.22 ppm e) 25.75 ppm f) 17.85 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Levels are DDT +1.14(DDE+TDE) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
3084 Adipose		GC	78	0.8-23 mg/kg extractable fat	6.2 mg/kg extractable fat	Abdominal tissue Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects >24 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976
3085 Adipose		GC	73	a) Not given b) Not given	a) 2.51 ppm b) 3.46 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr, from Pori and Jyvaskyla, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Maatta, K. Arstila, A.U. 1976

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Total DDT (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3086 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 4.1 ppm b) 2.3 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies. Levels higher in 22-65 yr olds b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland noninduatrialized area, high tobacco consumption Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.E. Clausen, J. 1979
3087 Adipose		CC GC		Not given	5.83 ppm	Samples from autopsies on accident victims living in Norfolk County, Canada. Significant correlation between levels in fat and blood. DDT; DDE; DDD; PESTICIDES; BLOOD; ADIPOSE TISSUE; CANADA; OCCUPATIONAL HAZARDS; AUTOPSIES; BIOACCUMULATION	Brown, J.F. Chow, L.Y. 1975
3088 Blood			44	a) 6-78 ppb b) 3-76 ppb c) Not given d) Not given	a) Not given b) Not given c) 32 ppb d) 25 ppb	a) Cord, blacks b) Cord, whites c) Maternal, blacks d) Maternal, whites Sets of maternal and umbilical cord bloods. DDT; BLOOD; UMBILICAL CORD; RACIAL STUDIES; PESTICIDE RESIDUES; COMPARATIVE EVALUATIONS; DDE	Sandifer, S.H. 1974
3089 Blood, plasma		GC	29	Not given	0.0740 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
3090 Blood, whole		CC GC	a) Not given b) 104 c) 315	a) Not given b) 0.004-0.102 ppm c) 0.001-0.084 ppm	a) 0.032 ppm b) 0.032 ppm c) 0.016 ppm	a) Samples from autopsies an accident victims living in Norfolk County, Canada. Significant correlation between levels in fat and blood b) Healthy Norfolk county residents c) Healthy Holland Marsh residents DDT; DDE; DDD; PESTICIDES; BLOOD; ADIPOSE TISSUE; CANADA; OCCUPATIONAL HAZARDS; AUTOPSIES; BIOACCUMULATION	Brown, J.F. Chow, L.Y. 1975

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Total DDT (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 354.50

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3091 Brain		GC	77	0.013-3.2 mg/kg extractable fat	0.70 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects >24 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976
3092 Brain		GC	81	a) Not given b) Not given	a) 0.10 ppm b) 1.18 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr, from Pori, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Maatta, K. Arstila, A.U. 1976
3093 Liver		GC	77	0.62-22.0 mg/kg extractable fat	6.0 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects >24 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976
3094 Liver		GC	73	a) Not given b) Not given	a) 0.22 ppm b) 3.38 ppm	a) Wet tissue b) Fat tissue Data available for age and sex groups. Autopsies from subjects < or = 82 yr, from Pori and Jyvaskyla, Finland. PESTICIDES; DDT; DDE; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; ADIPOSE TISSUE; BRAIN; LIVER; AUTOPSIES; COMPARATIVE EVALUATIONS; AGE; SEX; FINLAND	Hattula, M.L. Ikkala, J. Isomaki, H. Maatta, K. Arstila, A.U. 1976

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Total DDT (No postings in CHEMLINE).
50-29-3
C14-H9-Cl5
MW 350.50

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3095 Milk			57	0.02-2.76 ppm	0.34 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3096 Milk			29	Not given	0.0717 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDE; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lunenfeld, C. 1977
3097 Milk			a) 55 b) 42 c) 13	a) 0.0-0.298 ug/g b) Not given c) Not given	a) 0.114 ug/g b) 0.101 ug/g c) 0.146 ug/g	a) Smokers plus nonsmokers b) Nonsmokers c) Smokers Women in eastern Pennsylvania, predominately middle class, mean education 14.4 yr DDT; PESTICIDES; MILK; PENNSYLVANIA; SMOKING	Bradt, P.T. Herrenkohl, R.C. 1976
3098 Milk		GC TLC	a) 50 b) 15 c) 6	a) 5.2-349.0 ppb b) Not given c) Not given	a) 81.74 ppb b) 94.0 ppb c) 55.6 ppb	a) All samples b) Colostrum c) 9-16 wk after birth of infant Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Saip, M. 1976

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Total DDT (No postings in CHEMLINE).
50-29-3
C14-H9-C15
MW 354.50

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3099 Milk		GC	a) 27 b) 9 c) 10 d) 15 e) 10 f) 10 g) 40	a) 0.382-4.97 ppm b) 1.57-6.68 ppm c) 0.411-1.77 ppm d) 0.025-1.03 ppm e) 1.18-6.60 ppm f) 0.600-9.26 ppm g) 0.062-1.96 ppm	a) 1.88 ppm b) 3.06 ppm c) 1.11 ppm d) 0.480 ppm e) 2.55 ppm f) 3.54 ppm g) 0.695 ppm	a) Cotton, corn, and sesame-growing areas b) Corn and cotton area c) Corn area d) Guatemala City e) Banana area f) Cotton area g) Coffee-growing area, El Salvador a)-f) in Guatemala. Highest use of pesticides on cotton. Mothers from low-income families in Guatemala and El Salvador, areas chosen to represent different degrees of use of pesticides. Overuse of pesticides a particular problem in tropical countries. Prevalence of malnutrition may contribute to health effects. AGRICULTURE; CHLORINE ORGANIC COMPOUNDS; CROP DUSTING; DDT; DIELDRIN; EL SALVADOR; FOOD CONTAMINATION; GUATEMALA; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; INSECTICIDES; MILK; NUTRITIONAL DEFICIENCIES; PESTICIDES; PESTICIDE RESIDUES	de Campos, M. Olszyna-Marzys, A.E. 1979
3100 Milk, fat			a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 3.5 ug/kg b) 2.9 ug/kg c) 2.8 ug/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974
3101 Milk, whole		GC	a) 14 b) 5 c) 18	a) Not given b) Not given c) Not given	a) 0.11 ug/kg b) 0.088 ug/kg c) 0.086 ug/kg	a) Pooled samples, 1967 b) Pooled samples, 1968-1969 c) Pooled samples, 1971-1972 Women in Stockholm, Sweden PESTICIDES; POPULATION EXPOSURE; MILK; DDT; DDE; BIOACCUMULATION; SWEDEN	Westoo, G. 1974

Tryptophan, 5-hydroxy-, L- (8 CI)
L-Tryptophan, 5-hydroxy- (9 CI)
a250-09-8
C11-H12-N2-O3
mw 220.22

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3102 Blood, plasma	Injection	HPLC Fluorometry	5	28-0.22 nmoles/l	Not applicable	0.25 to 9 hr after 0.2 mg/kg by 20-min IV in patients on 50 mg t.i.d. carbidopa Continuous infusion data also given. Patients with myoclonic disorders with normal blood, liver, and kidney function. Ages 19-52 yr. Nausea and vomiting in patients on continuous infusion. Involuntary movements reduced. DRUGS; BLOOD PLASMA; DENMARK; ADULTS; NEUROMUSCULAR DISEASES; AMINO ACIDS	Magnussen, I. Nielsen-Kudsk, F. 1979

Uracil, 5-fluoro- (8 CI) (9 CI)
2,4(1H,3H)-Pyrimidinedione, 5-fluoro- (9 CI)
51-21-8
C4-H3-F-N2
MW 130.08, MP 282-283 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3103 Blood, plasma	Injection	HPLC	9	a) 26-123 ug/ml b) 17-43 ug/ml c) 4.8-26 ug/ml d) 2.6-19 ug/ml e) 0-6.3 ug/ml	a) 61 ug/ml b) 27 ug/ml c) 13 ug/ml d) 7.5 ug/ml e) 1.7 ug/ml	a) 5 min after injection b) 10 min after injection c) 20 min after injection d) 30 min after injection e) 60 min after injection Average dose 10.9 mg/kg. Patients in clinical oncology wards of University Hospitals in Madison, WI, ages 36-72 yr. DRUGS; CARCINOMAS; ADULTS; WISCONSIN; CHEMOTHERAPY	MacMillan, W.E. Wolberg, W.H. Welling, P.G. 1978

Uracil, 6-propyl-2-thio- (8 CI)
4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo- (9 CI)
51-52-5
C7-H10-N2-O-S
MW 170.25

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3104 Blood, serum	Ingestion	Colorimetry	9	7.7-3.9 ug/ml	Not given	1.5 and 4 hr means after 600 mg. Initial value, 4.8 ug/ml at 0.5 hr. Estimated from graphs. Lactating, euthyroid, healthy women, 1-8 months after delivery, ages 21-36 yr. 2 treated for Graves disease. DRUGS; MILK; BLOOD SERUM; LACTATION; DENMARK; HEALTH HAZARDS	Kaspsann, J.P. Hansen, J.M. Johansen, K. Helveg, J. 1980
3105 Milk	Ingestion	Colorimetry	9	0.7-0.5 ug/ml	Not given	1.5 and 4 hr means. Initial value, 0.55 ug/ml at 0.5 hr. Dose, 600 mg. 4 hr excretion, mean of 0.025% of dose. Estimated from graphs. Lactating, euthyroid healthy women, 1-8 months after delivery, ages 21-36 yr. 2 treated for Graves disease. DRUGS; MILK; BLOOD SERUM; LACTATION; DENMARK; HEALTH HAZARDS	Kaspsann, J.P. Hansen, J.M. Johansen, K. Helveg, J. 1980

Valeric acid, 2-propyl- (8 CI)
Pentanoic acid, 2-propyl- (9 CI)
99-66-1
C8-H16-O2
MW 144.21, BP 120-121 C at 14 mm Hg, 120-130 C at 20 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3106 Blood	Ingestion	GC	1	28.5-3.3 ug/ml	Not given	Mother, peak at 1.5 hr and low at 24 hr after 500 mg. Values estimated from graph. 27-yr-old woman with petit mal, focal motor seizures, and occasional grand mal first seen at 33 wk gestation. Infant delivered at 39 wk. CEREBRUM; DRUGS; DRUG THERAPY; PLACENTA; FETUS; MILK; NEUROPSM; INFANTS; NEUROMUSCULAR DISEASES; BLOOD; BLOOD SERUM; ANTICONVULSANTS; LACTATION; UMBILICAL CORD	Dickinson, R.G. Harland, R.C. Lynn, R.K. Smith, B. Gerber, N. 1979
3107 Blood	Ingestion		6	87-108 ug/ml	Not applicable	Steady state levels. 21 consecutive doses were: doses 1-7, 250 mg twice/day, doses 8-14, 500 mg twice/day, doses 15-21, 750 mg twice/day. Not explicitly stated that blood was the tissue used. 6 healthy adults, ages 22-23 yr. Adverse central nervous system effects in all 6 cases on 1000-1500 mg/day. DRUGS; DRUG THERAPY; BLOOD; ADULTS; WASHINGTON; ANTICONVULSANTS; PSYCHOTROPIC DRUGS; BEHAVIOR DISORDERS; CENTRAL NERVOUS SYSTEM DISEASES	Bowdle, T.A. Patel, I.H. Wilensky, A.J. Comfort, C. 1979
3108 Blood, serum	Ingestion	GC	2	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 22.2 ug/ml b) 22.3 ug/ml c) 15.6 ug/ml d) 9.9 ug/ml e) 34.3 ug/ml	a) Infant at birth, 6 hr after 250 mg b) Cord at birth, 6 hr after 250 mg c) Mother at birth, 6 hr after 250 mg d) Mother 62 hr after birth, 16 hr after 250-mg dose e) Mother 130 hr after birth, 3 hr after 250 mg dose. 27-yr-old woman with petit mal, focal motor seizures, and occasional grand mal first seen at 33 wk gestation. Infant delivered at 39 wk. CEREBRUM; DRUGS; DRUG THERAPY; PLACENTA; FETUS; MILK; NEUROPSM; INFANTS; NEUROMUSCULAR DISEASES; BLOOD; BLOOD SERUM; ANTICONVULSANTS; LACTATION; UMBILICAL CORD	Dickinson, R.G. Harland, R.C. Lynn, R.K. Smith, B. Gerber, N. 1979
3109 Blood, serum	Ingestion	GC	23	a) 27.9-3.5 ug/ml b) 11.2-3.5 ug/ml c) 33.4-3.5 ug/ml d) 10.2-3.7 ug/ml	a) 10.54 ug/ml b) 10.58 ug/ml c) 12.60 ug/ml d) 12.04 ug/ml	a) 0.5 and 36 hr after 250 mg as Na salt in syrup, fasting b) 0.5 and 36 hr after 250 mg as Na salt in syrup, after meal c) 0.5 and 36 hr after 250 mg as Na salt in syrup, fed 2 hr after dose d) 0.5 and 36 hr after 250 mg in capsule, fed 2 hr after dose Healthy males, on no other medication, fasted overnight, 21-31 yr old. DRUGS; BLOOD SERUM; ANTICONVULSANTS; ADULTS; COMPARATIVE EVALUATIONS	Chun, A.H.C. Hoffman, D.J. Friedmann, M. Carrigan, P.J. 1980

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Valeric acid, 2-propyl- (8 CI)
Pentanoic acid, 2-propyl- (9 CI)
99-66-1
C8-H16-O2
MW 144.21, BP 120-121 C at 14 mm Hg, 128-130 C at 20 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3110 Milk	Ingestion	GC	1	a) Not given b) Not given	a) 0.18 ug/ml b) 0.46 ug/ml	a) 62 hr after birth, 16 hr after 250-mg dose b) 130 hr after birth, 3 hr after 250-mg dose 27-yr-old woman with petit mal, focal motor seizures, and occasional grand mal first seen at 33 wk gestation. Infant delivered at 39 wk. ORGAN; DRUGS; DRUG THERAPY; PLACENTA; FETUS; MILK; NEWBORN; INFANTS; NEUROMUSCULAR DISEASES; BLOOD; BLOOD SERUM; ANTICONVULSANTS; LACTATION; UMBILICAL CORD	Dickinson, R.G. Harland, E.C. Lynn, R.K. Smith, D. Gerber, N. 1979
3111 Placenta	Ingestion	GC	1	Not given	5.2 ug/gm	At birth, 6 hr after 250 mg dose 27-yr-old woman with petit mal, focal motor seizures, and occasional grand mal first seen at 33 wk gestation. Infant delivered at 39 wk. ORGAN; DRUGS; DRUG THERAPY; PLACENTA; FETUS; MILK; NEWBORN; INFANTS; NEUROMUSCULAR DISEASES; BLOOD; BLOOD SERUM; ANTICONVULSANTS; LACTATION; UMBILICAL CORD	Dickinson, R.G. Harland, E.C. Lynn, R.K. Smith, D. Gerber, N. 1979

Valeric acid, 2-propyl-, sodium salt (8 CI)
Pentanoic acid, 2-propyl-, sodium salt (9 CI)
1069-66-5
C8-H16-O2.Na
MW 167.23

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3112 Blood, serum	Ingestion	GC	6	369-89 umoles/l	Not given	Range of means, 2 and 24 hr after 600-mg dose. 317 umoles/l at 0.5 hr, initial value. 21-39 yr olds with chronic epilepsy. DRUGS; DRUG THERAPY; ANTICONVULSANTS; ADULTS; UNITED KINGDOM; BLOOD SERUM; DRUG INTERACTION; NERVOUS SYSTEM DISEASES; DISEASES	Monks, A. Richens, A. 1980

Valeronitrile, 5-((3,4-dimethoxyphenethyl)methylamino)-2-(3,4-dimethoxyphenyl)-2-isopropyl- (9 CI)
Benzeneacetonitrile, alpha-(3-((2-(3,4-dimethoxyphenyl)ethyl)methylamino)propyl)-3,4-dimethoxy-alpha-(1-methylethyl)- (9 CI)
52-53-9
C27-H38-N2-O4
MW 454.59, BP 243-246 C at 0.01 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3113 Blood, serum	Injection Ingestion	Fluorometry	6	a) Not given b) Not given	a) 179 ng/ml b) 190 ng/ml	a) Peak 15 min after 10-mg injection (70 ng/ml at 1 hr and 20 ng/ml at 8 hr) b) Peak 1.5 hr after 120-mg oral dose (30 ng/ml at 0.5 hr and 75 ng/ml at 8 hr) Healthy Japanese subjects aged 21-68 yr. Marked prolongation of PQ interval on electrocardiograms, was proportional to serum level DRUGS; BLOOD SERUM; JAPAN	Koike, Y. Shimamura, K. Shudo, I. Saito, H. 1979

Valine, 3-mercapto-, D- (8 CI)
D-Valine, 3-mercapto- (9 CI)
52-67-5
C5-H11-N-O2-S
RR 149.21, RP 198.5 C (D-form)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3114 Blood, cells	Ingestion	HPLC	6	0.75-1.0 ug/l	0.80 ug/l	95% as reduced form. 750 mg/day D-penicillamine. Rheumatoid arthritis patients. PENICILLAMINE; MEASUREMENT METHODS; CANADA; RHEUMATOID ARTHRITIS; DRUGS; DRUG THERAPY; BLOOD; BLOOD PLASMA; ERYTHROCYTES; URINE; METABOLITES	Saetre, R. Rabenstein, D.L. 1978
3115 Blood, plasma	Ingestion	HPLC	6	2.7-8.1 ug/l	5.07 ug/l	33% as reduced form in non-protein fraction after 750 mg/day. Rheumatoid arthritis patients PENICILLAMINE; MEASUREMENT METHODS; CANADA; RHEUMATOID ARTHRITIS; DRUGS; DRUG THERAPY; BLOOD; BLOOD PLASMA; ERYTHROCYTES; URINE; METABOLITES	Saetre, R. Rabenstein, D.L. 1978
3116 Blood, whole	Ingestion	HPLC	6	1.8-4.2 ug/l	3.15 ug/l	40.3% as reduced form in non-protein fraction after 750 mg/day. Rheumatoid arthritis patients PENICILLAMINE; MEASUREMENT METHODS; CANADA; RHEUMATOID ARTHRITIS; DRUGS; DRUG THERAPY; BLOOD; BLOOD PLASMA; ERYTHROCYTES; URINE; METABOLITES	Saetre, R. Rabenstein, D.L. 1978
3117 Urine	Ingestion	HPLC	6	86-1360 ug/l	398 ug/l	15.5% as reduced form in non-protein fraction after 750 mg/day. Rheumatoid arthritis patients. PENICILLAMINE; MEASUREMENT METHODS; CANADA; RHEUMATOID ARTHRITIS; DRUGS; DRUG THERAPY; BLOOD; BLOOD PLASMA; ERYTHROCYTES; URINE; METABOLITES	Saetre, R. Rabenstein, D.L. 1978

Vanadium
7440-62-2
V
AtW 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3118 Hair		NA	11	Not detectable-0.75 ppm	0.23 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, H. 1977
3119 Hair		ES	a) 126 b) 90 c) 71 d) 85 e) 77 f) 28 g) 179 h) 108	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 0.20 ug/g b) 0.28 ug/g c) 0.40 ug/g d) 0.12 ug/g e) 0.20 ug/g f) 0.35 ug/g g) 0.20 ug/g h) 0.37 ug/g Geometric means	a) Long Island children b) Queens children c) Bronx children d) Long Island adults e) Queens adults f) Bronx adults g) Male children h) Female children Correlations between V and the following: dust, community location, sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.E. Pinkerton, C. 1975
3120 Kidney		ES		a) Not given b) Not given c) Not given	a) 2.87 ppm (2%) b) 2.45 ppm (3%) c) 1.96 ppm (3%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; ECHON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

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Vanadium
7440-62-2
V
AtW 50.9414, BP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3121 Liver		ES		a) Not given b) Not given c) Not given	a) 2.20 ppm (1%) b) 1.71 ppm (2%) c) 1.63 ppm (2%)	a) No renal disease b) Acute renal failure c) Chronic renal failure Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974
3122 Lung		ES	35	Not detectable-90.4 ug/g dry wt	Not given	Sections of lungs from subjects who had been bituminous coal miners for 23-50 yr. METALS; TRACE ELEMENTS; ALUMINUM; BARIUM; BERYLLIUM; BORON; CHROMIUM; COPPER; GERMANIUM; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; SILICON; SILVER; TIN; TITANIUM; VANADIUM; LUNGS; COAL; UNITED STATES; QUARTZ; MINERALS	Crable, J.V. Keenan, R.G. Wolowicz, F.R. Knott, H.J. Holtz, J.L. Gorski, C.H. 1967
3123 Lung		ES	20	Not given	2.1 mg/100 g dry wt	Includes upper and lower lobes, and lymph nodes of lung. Additional data available. Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
3124 Lung		ES	a) 129 b) 15	a) 1.8-4.7 ug/g dry wt b) Not given	a) 3.2 ug/g dry wt b) 0.8 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Leinhart, W.S. 1974

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Vanadium
7440-62-2
V
Atw 50.9414, MP 1917 C, BP 3000 C, VP 1 mm Hg at 2290 C, 10 mm Hg at 2570 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3125 Lung		ES	134	2.1-4.7 ug/g dry wt	3.3 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Lintiaca, L.P. Morris, H.B. Holtz, J.L. Bauer, P. Wolowicz, P.R. 1971
3126 Lymph node		ES	14	Not given	20.0 ug/100 g dry wt	Pulmonary hilar lymph nodes from subjects who had been bituminous coal miners for 12-50 yr in Raleigh, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
3127 Nail		NA	a) 50 b) 50 c) 34 d) 23	a) Not given b) Not given c) Not given d) Not given	a) 0.04 ug/g dry wt b) 0.07 ug/g dry wt c) 0.12 ug/g dry wt d) 0.10 ug/g dry wt	a) Fathers b) Mothers c) Male teenagers d) Female teenagers Values also given for medians and geometric means. 50 Melanesian families, mean age of fathers, 46 yr, mothers, 41 yr. 43 male children, 12-24 yr and 38 female children, 12-24 yr. CALCIUM; SODIUM; MAGNESIUM; ALUMINUM; SULFUR; CHLORINE; VANADIUM; MANGANESE; COPPER; TRACE ELEMENTS; BLOOD PRESSURE; NEW GUINEA; METALS; NAILS	Masironi, R. Koirtyohann, S.R. Pierce, J.O. Schaaschula, R.G. 1976
3128 Spleen		ES		a) Not given b) Not given c) Not given	a) 1.69 ppm (1%) b) 0.0 ppm (0%) c) 0.0 ppm (0%)	a) No renal disease b) Acute renal failures c) Chronic renal failures Dry wt basis Percent of samples with detectable levels is indicated in parentheses. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1974

Vitamin A
11103-57-4
EXACT COMPOSITION UNKNOWN OR UNDETERMINED

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3129 Blood, serum			187	a) Not given b) Not given	a) 50 ug/100 ml b) 48 ug/100 ml	a) Men b) Women Criteria for low levels < 20 ug/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, S. Hendricks, D.G. Mahoney, A.W. 1978
3130 Blood, serum	Ingestion	Neeld & Pearson	11	a) Not given b) Not given	a) 90 mcg % b) 440 mcg%	a) Before Vitamin A b) 7 hr after 300,000 I.U. vitamin A-palmitate (peak) Values estimated from graph When Vitamin A was given with various dietary fiber preparations serum levels equaled or exceeded control levels. Healthy 19-22 yr olds. VITAMINS; VITAMIN A; BLOOD SERUM; METABOLISM; FIBERS; DIETS; COMPARATIVE EVALUATIONS; GERMANY	Kasper, H. Rabast, U. Fazal, N. Pohle, F. 1979

Zinc
7440-66-6
Zn
At# 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3131 Adipose		X-ray spectros	4	Not given	1.29 ppm dry wt	Abdominal fat. 2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, N.F. Hill, M.W. Nielsen, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
3132 Aorta		X-ray spectros	9	Not given	58.2 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, N.F. Hill, M.W. Nielsen, K.K. Matough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
3133 Blood		AAS	72	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 64 ug/100 ml b) 62 ug/100 ml c) 62 ug/100 ml d) 105 ug/100 ml e) 103 ug/100 ml f) 100 ug/100 ml	a) Blood from 22 mothers, low birth wt group (1500-2500 g) b) Blood from 50 mothers, normal birth wt group (>2500 g) c) Blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity d) Cord blood from 22 mothers, low birth wt group e) Cord blood from 50 mothers, normal birth wt group f) Cord blood from 22 mothers, normal birth wt group matched with low birth wt group for sex, maternal age, race, smoking habits, parity. Mothers who gave birth in Newark, NJ, April-September, 1975. METALS; CALCIUM; CHROMIUM; COPPER; IRON; MAGNESIUM; ZINC; BLOOD; ADULTS; FETUS; NEW JERSEY; COMPARATIVE EVALUATIONS	Rogdon, J.D. Thied, I.S. Knap, F.W. Catterini, H. 1978
3134 Blood						Review METALS; COPPER; IRON; MAGNESIUM; MANGANESE; ZINC; METALLOPROTEINS; RHEUMATOID ARTHRITIS; REVIEW	Sorenson, J.R.J. 1978

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Zinc
7440-66-6
Zn
Atw 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3135 Blood		AAS	a) 29 b) 19 c) 17 d) 56 e) 37 f) 17 g) 38 h) 38 i) 7 j) 9	a) 3.13-5.89 ppm b) 3.36-7.81 ppm c) 3.1-5.7 ppm d) 2.9-9.7 ppm e) 2.5-9.1 ppm f) 3.9-7.6 ppm g) 2.9-6.9 ppm h) 2.0-9.1 ppm i) 3.3-5.8 ppm j) 3.2-5.2 ppm	a) 4.51 ppm b) 5.25 ppm c) 4.8 ppm d) 4.9 ppm e) 4.7 ppm f) 5.8 ppm g) 4.6 ppm h) 4.8 ppm i) 4.8 ppm j) 4.3 ppm	a) 0-3 yr-old hospital patients b) 4-6 yr-old hospital patients c) Residents < 1 km from smelter, age 2-3 yr d) Residents 1-2 km from smelter, age 2-3 yr e) Residents >2 km from smelter, 2-3 yr f) Age 2-3 yr, blood Pb < 100 ppb g) Age 2-3 yr, blood Pb 101-150 ppb h) Age 2-3 yr, blood Pb 151-200 ppb i) Age 2-3 yr, blood Pb 201-250 ppb j) Age 2-3 yr, blood Pb > 250 ppb Dutch subjects aged 2 mo or older. METALS; CADMIUM; COPPER; IRON; LEAD; MANGANESE; ZINC; BLOOD; BLOOD SMEAR; SMOKING; ORAL CONTRACEPTIVES; INDUSTRIES; SHELTERS; ADULTS; CHILDREN; SEX; NETHERLANDS	Zielhuis, R.L. del Castillo, F. Herber, R.F.M. Wibowo, A.A.E. 1978
3136 Blood		RA	a) 709 b) 667	a) Not given b) Not given	a) 36.5 + or - 7.9 ug/g b) 34.9 + or - 8.6 ug/g	a) Maternal b) Fetal Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; PREGNANCY; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Naglan, R.J. Brul, A.D. Schubert, A. Wilson, D. Larson, K. Dyer, W. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
3137 Blood		AAS	16	a) Not given b) Not given c) Not given	a) 82 + or - 9 ug/100 ml b) 66 + or - 7 ug/100 ml c) 16 + or - 3 ug/100 ml	a) Total serum b) Albumin-bound c) Alpha sub 2 macroglobulin-bound Healthy fasted males, 23 to 69 yr of age. ZINC; METALS; FRANCE; MEASUREMENT METHODS; BLOOD; PROTEINS; MINERALS; METABOLISM	Giroux, E.L. 1975
3139 Blood, cells		AAS	85	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given	a) 39.8 + or - 6.3 ug/gHb b) 107.7 + or - 14.3 ug/10(E+10) cells c) 50.7 + or - 7.2 ug/gHb d) 68.4 + or - 8.2 ug/10(E+10) cells e) 54.6 + or - 8.2 ug/gHb f) 74.3 + or - 10.8 ug/10(E+10) cells g) 48.2 + or - 5.6 ug/gHb h) 70.7 + or - 11.6 ug/10(E+10) cells	a), c), e), and g) are erythrocytes, b), d), f), and h) are leucocytes. Patients differ from controls, P <0.001. a) and b) 20 cases, c) and d) 10, e) and f) 5, g) and h) 10 Patients with chronic renal failure. ZINC; METALS; MINERAL METABOLISM; BLOOD PLASMA; ERYTHROCYTES; LEUKOCYTES; HAIR; DISEASES; ADULTS; COMPARATIVE EVALUATIONS; ANEMIA	Mahajan, S.K. Prasad, A.S. Rabbani, P. Briggs, W.A. McDonald, F.D. 1979

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Zinc
7440-66-6
Zn
Atw 65.38, mp 419.5 C, bp 909 C, vp 1 mm Hg at 487 C, 10 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE BODY?	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3139 Blood, plasma		AAS	145	0.85-0.90 ppm Range of means	0.87 ppm	Additional data available. Healthy adults not fasting, aged 19 to 51 yr, from Sweden. METALS; ZINC; COPPER; BLOOD; BLOOD PLASMA; SALIVA; DENMARK; SEX; ADULTS	Mather, A. Wallenius, K. Abdulla, M. 1977
3140 Blood, plasma	Ingestion	AAS	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 31 ug/100 ml b) 190 ug/100 ml c) 15 ug/100 ml d) 167 ug/100 ml	a) Patient 1, after 9 mo of diarrhea and 6 wk of parenteral alimentation, before Zn therapy b) Patient 1 after oral Zn, 35 mg/day, 10 days c) Patient 2, after 4 mo of diarrhea and 5 wk of parenteral alimentation, before Zn therapy. d) Patient 2, after oral Zn, 35 mg/day, 10 days Two infants treated with parenteral alimentation for intractable diarrhea. 22-25 days after start of parenteral alimentation patients became feverish. Rash of erythema, vesicles, denuded patches, and pustules developed around natural orifices, genitalia, perineum, fingers, and toes. Alopecia, blepharitis, and paronychia. Rash and fever responded to oral zinc. Striking decrease in serum alkaline phosphatase. Responded to oral zinc. ZINC; BLOOD PLASMA; COPPER; SKIN DISEASES; METALS	Arakawa, T. Tamura, T. Igarashi, T. Suzuki, H. Sandstead, H.H. 1976
3141 Blood, plasma	Ingestion	AAS		90-119 ug/dl	76 + or - 12 ug/dl	50 tests conducted after an overnight fast. Also data on changes in plasma Zn when done ingested with traditional diet, NaFeEDTA, or NaZnEDTA, but absolute values not given. Adult volunteers living in Guatemala, in apparent good health, fasted overnight. ZINC; METALS; DIETS; GUATEMALA; ADULTS; COMPARATIVE EVALUATIONS; BLOOD PLASMA	Solomons, N.W. Jacob, R.A. Pineda, O. Viteri, F.E. 1979

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Zinc
7440-66-6
Zn
AW 65.38, BP 919.5 C, MP 900 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3182 Blood, plasma	Ingestion	NR	a) 44 b) 29	a) Not given b) Not given	a) 81.9 + or - 2.2 ug/100 ml b) 76.5 + or - 2.2 ug/100 ml	a) Boys, base-line value b) Girls, base-line value Boys' levels higher than girls' (P<0.05) 50% of children (control) received non-Zn fortified cereal and 50% (test) received fortified cereal which provided 2.57 extra mg Zn per day. After 9 mo, test children had 6.6 ug/dl more plasma Zn than controls (P<0.05). Healthy children 33-90 mo old (mean age 57.9 mo), from middle income families, enrolled in private preschool and kindergarten in Denver, 1975. METALS; TRACE ELEMENTS; ZINC; COMPARATIVE EVALUATIONS; BLOOD PLASMA; HAIR; SALIVA; URINE; CHILDREN; SEX; DIETS; COLORADO	Hambidge, K.M. Chavez, A. Brown, R.M. Walravens, P.A. 1979
3183 Blood, plasma	Ingestion	AAS	a) 96 b) 22 c) 6 d) 12	a) 71-126 ug/100 ml b) 42-124 ug/100 ml c) 38-82 ug/100 ml d) 32-80 ug/100 ml	a) 99 ug/100 ml b) 86 ug/100 ml c) 57 ug/100 ml d) 57 ug/100 ml	a) Healthy controls b) Marasmus patients c) Marasmic kwashiorkor patients d) Kwashiorkor patients Except for normal range all values estimated from graphs Zn levels related to individual clinical features of severe malnutrition. Controls- 16 normal Jamaican children 6-20 mo old attending well-baby clinic and 40 adult staff members, University Hospital of the West Indies. Malnourished children- Jamaicans, 6-21 mo old when hospitalized. In malnourished children, low plasma Zn concentration strongly associated with presence of nutritional edema. In absence of edema, significant relationships between plasma Zn concentrations and stunting, skin ulceration, and wasting. METALS; TRACE ELEMENTS; ZINC; COMPARATIVE EVALUATIONS; CHILDREN; NUTRITIONAL DEFICIENCIES; NUTRITIONAL DISORDERS; BLOOD PLASMA; JAMAICA	Golden, B.E. Golden, M.H.N. 1979
3184 Blood, plasma		AAS	a) 27 b) 72 c) 7 d) 34	a) 48-150 ug/100 ml b) 52-120 ug/100 ml c) 52-91 ug/100 ml d) 50-169 ug/100 ml	a) 78.5 ug/100 ml b) 77.3 ug/100 ml c) 72.3 ug/100 ml d) 86.6 ug/100 ml	a) Males, 65-94 yr old, without vitamin supplement b) Females, 65-95 yr old, without vitamin supplement c) Males, 66-78 yr old, with multivitamin supplement d) Females, 67-93 yr old, with multivitamin supplement AGE; BLOOD; HAIR; IRELAND; METALS; TRACE ELEMENTS; VITAMINS	Vir, S.C. Love, A.H.G. 1979

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3145 Blood, plasma		AAS	a) 20 b) 10 c) 5 d) 10	a) Not given b) Not given c) Not given d) Not given	a) 112.9 + or - 13.6 ug/dl b) 78.6 + or - 6.8 ug/dl c) 82.8 + or - 4.6 ug/dl d) 84.8 + or - 2.8 ug/dl	a) Controls, normal subjects, ages 28-60 yr b) Hemodialyzed patients, ages 38-64 yr c) Peritoneal dialyzed patients, ages 44-65 yr d) Nondialyzed patients, ages 36-58 yr Patients differ from controls, P<0.001. Patients with chronic renal failure. ZINC; METALS; MINERAL METABOLISM; BLOOD PLASMA; ERYTHROCYTES; LEUKOCYTES; HAIR; DISEASES; ADULTS; COMPARATIVE EVALUATIONS; AMMONIA	Mahajan, S.H. Prasad, A.S. Rabbani, P. Briggs, W.A. McDonald, F.D. 1979
3146 Blood, plasma		AAS	a) 6 b) 12 c) 16 d) 20 e) 10 f) 9 g) 24 h) 22	a) 0.72-1.05 ug/ml b) 0.39-1.18 ug/ml c) 0.52-1.31 ug/ml d) 0.39-1.05 ug/ml e) 0.72-1.18 ug/ml f) 0.59-1.18 ug/ml g) 0.67-1.11 ug/ml h) 0.76-1.13 ug/ml	a) 0.817 ug/ml b) 0.790 ug/ml c) 0.817 ug/ml d) 0.768 ug/ml e) 0.916 ug/ml f) 0.850 ug/ml g) 0.905 ug/ml h) 0.966 ug/ml	a) 5-<10 yr old males b) 5-<10 yr old females c) 10-<15 yr old males d) 10-<15 yr old females e) 60+ yr old males f) 60+ yr old females g) Caucasians, controls 11-17 yr old males h) Caucasians, 11-17 yr old females Aborigines, 5-77 yr old, from Nowanjum Fitzroy Crossing communities of N.W. Australia. Middle-class Caucasian children as controls. BLOOD SERUM; BLOOD PLASMA; ZINC; COPPER; IRON; METALS; AUSTRALIA; DIETS; AGE; CHILDREN; ADULTS	Holt, A.B. Spargo, R.M. Iveson, J.B. Faulkner, G.S. Cheek, D.B. 1980
3147 Blood, serum		AAS	a) 5 b) 5	a) 32.8-62.8 ug/dl b) 30.8-78.2 ug/dl	a) 44.9 ug/dl b) 63.5 ug/dl	a) Women taking a combination oral contraceptive, after 35 days on diet b) Women not taking a contraceptive, after 35 days on diet Diet contained no Zn, Cu, Fe, but was otherwise nutritionally adequate. Some subjects: diarrhea, sore throat, stomatitis aphthous. ZINC; COPPER; METALS; NITROGEN; BLOOD SERUM; ORAL CONTRACEPTIVES; EROTEINS; METABOLISM	Hess, F.H. King, J.C. Margen, S. 1977a
3148 Blood, serum		AAS	35	a) Not given b) Not given c) Not given d) Not given	a) 729 ug/l b) 351 ug/l c) 748 ug/l d) 1038 ug/l	a) Day 1 b) Day 2 c) Day 10 d) Day 20 35 burn cases, 15-61 yr. Average of 34% of body surface burnt. ZINC; COPPER; BLOOD SERUM	LaFargue, P. Couture, J.C. Monteil, R. Guilbaud, J. Saliou, L. 1976
3149 Blood, serum						Review MAGNESIUM; LEAD; ZINC; METALS; TRACE ELEMENTS; DRINKING WATER; BLOOD; BLOOD SERUM; HEART; BONES; UNITED KINGDOM; CANADA; UNITED STATES; FINLAND	Sharrett, A.R. 1977

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Zinc
7440-66-6
Zn
AtW 65.38, BP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3350 Blood, serum		AAS	187	a) Not given b) Not given	a) 110 ug/100 ml b) 107 ug/100 ml	a) Men b) Women Criteria for low levels < 81 ug/100 ml. Rural Utahns, 58 men, 129 women, mean age 69 yr. DIETS; TRACE ELEMENTS; CHOLESTEROLS; BLOOD SERUM; ZINC; COPPER; POTASSIUM; SODIUM; MAGNESIUM; CALCIUM; IRON; VITAMIN A; VITAMINS	Fisher, E. Hendricks, D.G. Mahoney, A.W. 1978
3351 Blood, serum	Ingestion	AAS	a) 16 b) 16 c) 9	a) 99-280 ug/dl b) 58-98 ug/dl c) 89-123 ug/dl	a) Not applicable b) Not applicable c) Not applicable	a) Control, 0 and 2 hr after 50 mg Zn. Final value, 165 ug/dl at 6 hr b) Cirrhotic, 0 and 2 hr after 50 mg Zn. Final value, 54 ug/dl at 6 hr c) Postsurgical group, 0 and 2 hr after 50 mg Zn. Final value, 90 ug/dl at 6 hr All groups fasted before Zn. Controls, patients with alcoholic cirrhosis, surgical patients with delayed healing. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Torch, R.E. 1979
3352 Blood, serum	Ingestion	AAS	a) 59 b) 8	a) Not given b) Not given	a) 77 + or - ug/100 ml b) 86 + or - 10 ug/100 ml	a) Subjects in survey - dietary intake of 9.8 + or - 3.6 mg/day determined by dietary recall b) Subjects in metabolic study - 11.6 + or - 4.3 mg/day included in diet 13.5-16.6 yr old girls participating in either a 30 day metabolic study or a nutrition survey. METALS; TRACE ELEMENTS; MINERALS; ZINC; SALIVA; BLOOD SERUM; HAIR; COMPARATIVE EVALUATIONS; ADOLESCENTS; DIETS; METABOLISM; INDIANA	Greger, J.L. Sickles, V.S. 1979
3353 Blood, serum	Ingestion	AAS	62	a) Not given b) Not given	a) 83 + or - 23 ug/100 ml b) 83 + or - 37 ug/100 ml	a) First or second trimester b) Third trimester (39 completed study) Subsample of 344 women whose daily Zn intake was 1-29 mg, based on 24-hr dietary recall. 29 or less on diets that met or exceeded Recommended Dietary Allowance. No significant correlation between low intakes and low serum levels during pregnancy. Pregnant low-income women of Mexican descent, 15-40 yr old, who attended 2 Los Angeles County prenatal clinics 1972-1974. During 3rd trimester hemoglobin and folic acid levels higher in women with acceptable serum Zn levels than in those with low serum levels. METALS; TRACE ELEMENTS; ZINC; BLOOD SERUM; NUTRITIONAL DEFICIENCIES; PREGNANCY; CALIFORNIA	Hunt, I.F. Murphy, N.J. Cowan, J. Smith, J.C., Jr. 1979

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Zinc
7440-66-6
Zn
AtW 65.38, HP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3154 Blood, serum	Ingestion	AAS	8	297.4-317.0 ug/100 ml	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 10.99 (10.52-11.16) mg Zn/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hemicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS; COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.R. Kies, C. Fox, H.M. 1979
3155 Blood, serum		AAS	24	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.7 ug/ml b) 2.3 ug/ml c) 2.2 ug/ml d) 1.4 ug/ml e) 1.5 ug/ml f) 2.2 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-15 mo lactation e) 16-21 mo lactation f) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
3156 Blood, serum		AAS	a) 15 b) 10 c) 12 d) 7 e) 42 f) 36	a) 0.55-0.93 ug/ml b) 0.60-1.18 ug/ml c) 0.60-0.95 ug/ml d) 0.65-0.80 ug/ml e) 0.50-1.30 ug/ml f) 0.56-1.22 ug/ml	a) 0.734 ug/ml b) 0.791 ug/ml c) 0.725 ug/ml d) 0.709 ug/ml e) 0.959 ug/ml f) 0.871 ug/ml	a) 5-<10 yr, males b) 5-<10 yr, females c) 10-<15 yr, males d) 10-<15 yr, females e) 20-60 yr, males f) 20-60 yr, females Aborigines from Mowanjum. Hypozincemia >50% in 5-15 yr olds. Aborigines, 5-60 yr old from Mowanjum and Fitzroy Crossing communities of N.W. Australia. BLOOD SERUM; BLOOD PLASMA; ZINC; COPPER; IRON; METALS; AUSTRALIA; DIETS; AGE; CHILDREN; ADULTS	Holt, A.D. Spargo, R.M. Iveson, J.B. Faulkner, G.S. Cheek, D.B. 1980
3157 Blood, serum	Injection	AAS	19	a) 36-140 ug/dl b) 30-130 ug/dl	a) 80 + or - 7 ug/dl b) 66 + or - 6 ug/dl (SE)	a) Pre-total parenteral nutrition b) During total parenteral nutrition (5-42 days) Zinc content of hyperalimentation fluid was 200-800 ug/l. Means in a) and b) different, P<0.01. Cancer patients, ages 12-63 yr, mean wt loss of 10.9 + or - 3.2% from pre-illness weight. ZINC; COPPER; METALS; MINERAL METABOLISM; BLOOD SERUM; URINE; NEOPLASMS; DIETS	Lowry, S.F. Goodgame, J.T. Smith, J.C. Maher, M.M. Makuch, R.W. Menkin, R.I. Brennan, M.F. 1979
3158 Blood, whole		AAS	145	5.91-6.78 ppm Range of means	6.41 ppm	Females had significantly lower level than males (P<0.001). Additional data available. Healthy adults not fasting, aged 19 to 51 yr, from Sweden. METALS; ZINC; COPPER; BLOOD; BLOOD PLASMA; SALIVA; DENMARK; SEX; ADULTS	Mathur, A. Wallenius, K. Abdulla, M. 1977

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Zinc
7440-66-6
Zn
Atw 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3159 Hair		NA	11	155-865 ppm	308 ppm	Scalp hair Donors from 2 villages of Waika Indians in the Amazonas Territories of Venezuela. HAIR; VENEZUELA; METALS; TRACE ELEMENTS; SODIUM; ALUMINUM; SILICON; CHLORINE; POTASSIUM; SCANDIUM; TITANIUM; VANADIUM; CHROMIUM; GOLD; MANGANESE; IRON; COBALT; NICKEL; COPPER; ZINC; ARSENIC; SELENIUM; BROMINE; RUBIDIUM; STRONTIUM; SILVER; ANTIMONY; IODINE; CESIUM; BARIUM; LANTHANUM; CERIUM; SAMARIUM; MERCURY	Perkons, A.K. Velandia, J.A. Dienes, E. 1977
3160 Hair		AAS	3	a) 0.3-2.0 ug/ml b) 0.2-1.8 ug/ml c) 0.13-0.75 ug/ml	a) Not given b) Not given c) Not given	a) Subject 1, graying brown hair b) Subject 2, dark brown hair c) Subject 3, bleached brown hair Range is range of values along length of a hair. Values from graphs. Residents of Vancouver, British Columbia, aged 43, 25 and 29 yr. ZINC; METALS; HAIR; CANADA	Nass, D. Pate, B.D. 1977
3161 Hair		AAS	a) 179 b) 108	a) Not given b) Not given	a) 83.9 ug/g b) 104.1 ug/g Geometric means	a) Male children b) Female children Correlation between Zn and sex. Additional data. Scalp hair, Caucasians in NY, ages <1 to greater than 51 yr. METALS; TRACE ELEMENTS; BARIUM; BORON; CADMIUM; CHROMIUM; COPPER; IRON; LEAD; LITHIUM; MANGANESE; MERCURY; NICKEL; SELENIUM; SILVER; TIN; VANADIUM; ZINC; HAIR; AGE; ADULTS; CHILDREN; SEX; COMPARATIVE EVALUATIONS; DUST; SOILS; AIR POLLUTION; URBAN AREAS; NEW YORK	Creason, J.P. Hinners, T.A. Bumgarner, J.F. Pinkerton, C. 1975
3162 Hair	Ingestion	AAS	a) 59 b) 8	a) Not given b) Not given	a) 183 + or - 27 ug/g b) 182 + or - 50 ug/g	a) Subjects in survey - dietary intake of 9.8 + or - 3.6 mg/day determined by dietary recall b) Subjects in metabolic study - 11.6 + or - 4.3 mg/day included in diet 13.5-18.6 yr old girls participating in either a 30 day metabolic study or a nutrition survey. METALS; TRACE ELEMENTS; MINERALS; ZINC; SALIVA; BLOOD SERUM; HAIR; COMPARATIVE EVALUATIONS; ADOLESCENTS; DIETS; METABOLISM; INDIANA	Greger, J.L. Sickles, V.S. 1979

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Zinc
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Zn
Atw 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3163 Hair	Ingestion	ES	a) 52 b) 39	a) Not given b) Not given	a) 96.4 + or - 4.9 ug/g b) 116.5 + or - 7.5 ug/g	a) Boys, base-line value b) Girls, base-line value P<0.05 Controls received non-Zn fortified cereal and rest received cereal with 2.57 mg added per day. After 9 mo, test girls had 30.3 ug/g more hair Zn than controls (P<0.05). Healthy children 33-90 mo old (mean age 57.9 mo), from middle income families, enrolled in private preschool and kindergarten in Denver, 1975. METALS; TRACE ELEMENTS; ZINC; COMPARATIVE EVALUATIONS; BLOOD PLASMA; HAIR; SALIVA; URINE; CHILDREN; SEX; DIETS; COLORADO	Hambidge, K.M. Chavez, M.N. Brown, R.M. Walravens, P.A. 1979
3164 Hair		AAS	a) 28 b) 76 c) 7 d) 35	a) 85-499 ug/g b) 90-517 ug/g c) 168-372 ug/g d) 72-447 ug/g	a) 203.1 ug/g b) 218.0 ug/g c) 265.9 ug/g d) 246.6 ug/g	a) Males, 65-94 yr old, without vitamin supplement b) Females, 65-95 yr old, without vitamin supplement c) Males, 66-78 yr old, with multivitamin supplement d) Females, 67-93 yr old, with multivitamin supplement. AGE; BLOOD; HAIR; IRELAND; METALS; TRACE ELEMENTS; VITAMINS	Vir, S.C. Love, A.H.G. 1979
3165 Hair		AAS	8	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 175 ppm b) 198 ppm c) 165 ppm d) 184 ppm e) 156 ppm	a) 1-6 mo lactation b) 7-9 mo lactation c) 10-15 mo lactation d) 16-21 mo lactation e) 22-31 mo lactation White women, 1-31 mo postpartum. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979
3166 Hair			90	69-219 g/g	131 + or - 40 g/g	Height or height/age accounted for <1% of the variance. Hispanic-American 4-yr-olds in a day care and meals-for-children program >6 months, Tulare County, CA. ZINC; HAIR; CHILDREN; CALIFORNIA; RACIAL STUDIES; NUTRITIONAL DEFICIENCIES; METALS; TRACE ELEMENTS; BIOINDICATORS	Bradfield, R.B. Hambidge, K.M. 1980
3167 Hair		AAS	a) 20 b) 10 c) 5 d) 10	a) Not given b) Not given c) Not given d) Not given	a) 190.5 + or - 16.9 ug/g b) 188.0 + or - 18.6 ug/g c) 150.7 + or - 16.8 ug/kg d) 138.8 + or - 12.6 ug/g	a) Controls, ages 28-60 yr b) Hemodialyzed patients, ages 38-64 yr c) Peritoneal dialyzed patients, ages 58-65 yr d) Nondialyzed patients, ages 36-58 yr All patients differ from controls, P<0.001. Patients with chronic renal failure. ZINC; METALS; MINERAL METABOLISM; BLOOD PLASMA; ERYTHROCYTES; LEUKOCYTES; HAIR; DISEASES; ADULTS; COMPARATIVE EVALUATIONS; ANEMIA	Mahajan, S.K. Prasad, A.S. Rabbani, P. Briggs, W.A. McDonald, F.D. 1979

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3168 Kidney		X-ray spectros	12	a) Not given b) Not given	a) 124 ppm dry wt b) 196 ppm dry wt	a) Medulla b) Cortex 2 samples per case. 2 analyses per sample. Samples from 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, R.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
3169 Kidney		ES	a) 133 b) 78 c) 88	a) Not given b) Not given c) Not given	a) 120 ppm b) 103 ppm c) 113 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) and b) different, P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1978
3170 Liver		X-ray spectros	10	Not given	152 ppm dry wt	2 samples per case. 2 analyses per sample. 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, R.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
3171 Liver		ES	a) 91 b) 48 c) 75	a) Not given b) Not given c) Not given	a) 159 ppm b) 202 ppm c) 201 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c), P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indrapramit, S. Alexander, G.V. Gonick, H.C. 1978

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3172 Lung		AAS	26	Not given	130.0 ug/100 g dry wt	Sections of lungs from subjects who had been bituminous coal miners for 12-50 yr in Raleigh County, West Virginia. METALS; TRACE ELEMENTS; COAL; BERYLLIUM; COBALT; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; SILICA; QUARTZ; LYMPH NODES; WEST VIRGINIA	Keenan, R.G. Crable, J.V. Smallwood, A.W. Carlberg, J.R. 1971
3173 Lung		AAS	a) 63 b) 15	a) 70-96 ug/g dry wt b) Not given	a) 82 ug/g dry wt b) 80 ug/g dry wt	a) Coal miners b) Controls Sections of lungs from deceased coal miners and non-coal miners from Raleigh County, WV. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Sweet, D.V. Crouse, W.E. Crable, J.V. Carlberg, J.R. Lainhart, W.S. 1974
3174 Lung		AAS	68	75-96 ug/g dry wt	86 ug/g dry wt	Range of means. Additional data available. Sections of lungs from deceased West Virginia bituminous coal miners. METALS; TRACE ELEMENTS; COAL; SILICA; BERYLLIUM; CHROMIUM; COPPER; IRON; LEAD; MAGNESIUM; MANGANESE; NICKEL; TITANIUM; VANADIUM; ZINC; LUNGS; COMPARATIVE EVALUATIONS; WEST VIRGINIA	Carlberg, J.R. Crable, J.V. Listiaca, L.P. Morris, H.B. Holtz, J.L. Bauer, P. Wolowicz, F.R. 1971
3175 Milk		AAS	a) 28 b) 39 c) 23 d) 13 e) 28 f) 30	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 1.60 + or - 0.23 ug/ml b) 1.05 + or - 0.15 ug/ml c) 0.75 + or - 0.11 ug/ml d) 0.63 + or - 0.09 ug/ml e) 0.69 + or - 0.18 ug/ml f) 0.60 + or - 0.19 ug/ml	a) 1-3 mo lactation b) 4-6 mo lactation c) 7-9 mo lactation d) 10-12 mo lactation e) 13-18 mo lactation f) 19-31 mo lactation White women, 19-42 yr age, 22 primiparae and 16 multiparae. BLOOD SERUM; MILK; HAIR; METALS; LACTATION; CALCIUM; MAGNESIUM; MANGANESE; IRON; COPPER; ZINC	Vaughan, L.A. Weber, C.W. Kemberling, S.R. 1979

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3176 Milk		AAS	a) 76 b) 77 c) 23 d) 79 e) 25	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 5.32 ug/ml b) 2.00 ug/ml c) 1.16 ug/ml d) 2.0 ug/ml e) 2.5 ug/ml	a) Colostrum, high and low income groups b) After lactation 1-3 months, high and low income groups c) After lactation > or = 13 months, high and low income groups d) After lactation 1-3 months, low income group e) After lactation 1-3 months, high income group Significant difference between income groups at 1-3 months but not at 4-6 months. Additional data available. Women from urban and rural India. METALS; TRACE ELEMENTS; COPPER; MAGNESIUM; ZINC; MILK; COMPARATIVE EVALUATIONS; URBAN AREAS; RURAL AREAS; INDIA	Rajalakshmi, K. Srikantia, S.G. 1980
3177 Pancreas		X-ray spectros	4	Not given	93.8 ppm dry wt	2 samples per case. 2 analyses per sample. Sample from 1974 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelson, N.F. Hill, M.W. Nielson, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979
3178 Placenta		NA	811	Not given	70.5 + or - 13.5 ug/g	Dry wt basis Samples from 4 hospitals in Nashville, TN. PLACENTA; METALS; TRACE ELEMENTS; TENNESSEE; BLOOD; HAIR; COMPARATIVE EVALUATIONS; MERCURY; LEAD; CADMIUM; SELENIUM; RUBIDIUM; IRON; ZINC; COBALT	Naglan, B.J. Brul, A.B. Schulert, A. Wilson, D. Larsen, K. Dyer, N. Mansour, M. Schaffner, W. Hoffman, L. Davies, J. 1974
3179 Saliva		AAS	a) 36 b) 136	a) 0.041-0.089 ppm b) 0.426-0.585 ppm Range of means	a) 0.046 ppm b) 0.478 ppm	a) Stimulated parotid saliva b) Resting mixed saliva Additional data available. Healthy adults not fasting, aged 19 to 51 yr, from Sweden. METALS; ZINC; COPPER; BLOOD; BLOOD PLASMA; SALIVA; DENMARK; SEX; ADULTS	Mathur, A. Wallenius, K. Abdulla, M. 1977

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3180 Saliva	Ingestion	AAS	67	a) Not given b) Not given c) Not given d) Not given	a) 173 + or - 94 ng/ml b) 30.5 + or - 14.8 mg/ml c) 226 + or - 77 ng/ml d) 29 + or - 10.1 mg/ml	a) Whole mixed saliva, subjects in survey - dietary intake of 9.8 + or - 3.6 mg/day determined by dietary recall b) Supernatant of saliva of group a) c) Whole mixed saliva, subjects in metabolic study-11.6 + or - 4.3 mg/day included in diet d) Supernatant of saliva of group c) Mean Zn and protein concentrations in saliva correlated. Zn levels in saliva not correlated to serum or hair levels a) and b) 59 cases, c) and d) 8 cases. 13.5-14.6 yr old girls participating in either a 30 day metabolic study or a nutrition survey. METALS; TRACE ELEMENTS; MINERALS; ZINC; SALIVA; BLOOD SERUM; HAIR; COMPARATIVE EVALUATIONS; ADOLESCENTS; DIETS; METABOLISM; INDIANA	Greger, J.L. Sickles, V.S. 1979
3181 Saliva	Ingestion	ES	a) 12 b) 7	a) Not given b) Not given	a) 68.2 + or - 9.5 mg/ml b) 41.3 + or - 6.9 mg/ml	a) Boys, base-line value b) Girls, base-line value Boys' parotid saliva level higher than girls' (P<0.05) 50% of children (control) received non-Zn fortified cereal and 50% (test) received fortified cereal which provided 2.57 extra mg Zn per day. After 9 mo no significant difference in saliva Zn of control and test groups. Healthy children 33-90 mo old (mean age 57.9 mo), from middle income families, enrolled in private preschool and kindergarten in Denver, 1975. METALS; TRACE ELEMENTS; ZINC; COMPARATIVE EVALUATIONS; BLOOD PLASMA; HAIR; SALIVA; URINE; CHILDREN; SEX; DIETS; COLORADO	Hambidge, K.M. Chavez, M.N. Brown, R.M. Walravens, P.A. 1979
3182 Spleen		X-ray spectros	8	Not given	66.0 ppm dry wt	2 samples per case. 2 analyses per sample. 1976 autopsies of 10 Pima Indians, a Papago, and a Creek Indian. POTASSIUM; CALCIUM; IRON; COPPER; ZINC; RUBIDIUM; NICKEL; LEAD; METALS; TRACE ELEMENTS; LIVER; SPLEEN; AORTA; KIDNEYS; ADIPOSE TISSUE; PANCREAS; MEASUREMENT METHODS; AUTOPSIES	Mangelsen, M.F. Hill, M.W. Nielsen, K.K. Eatough, D.J. Christensen, J.J. Izatt, R.M. Richards, D.O. 1979

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Zinc
7440-66-6
Zn
Atw 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3183 Spleen		ES	a) 92 b) 40 c) 76	a) Not given b) Not given c) Not given	a) 21.8 ppm b) 29.3 ppm c) 30.4 ppm	a) No renal disease b) Acute renal failures c) Chronic renal failures a) different from b) and c) < P<0.01 Values are dry wt basis. Autopsies at UCLA Hospital. TRACE ELEMENTS; METALS; AUTOPSIES; CALIFORNIA; KIDNEYS; LIVER; SPLEEN; DISEASES; HYPERTENSION; SODIUM; POTASSIUM; CALCIUM; PHOSPHORUS; MAGNESIUM; CADMIUM; ZINC; COPPER; LEAD; IRON; MANGANESE; ALUMINUM; SILICON; TITANIUM; COBALT; NICKEL; MOLYBDENUM; TIN; CHROMIUM; STRONTIUM; BARIUM; LITHIUM; SILVER; VANADIUM; BORON	Indraprasit, S. Alexander, G.V. Gonick, H.C. 1978
3184 Teeth			a) 28 b) 28	a) Not given b) Not given	a) 132 ppm b) 143 ppm	a) NE Bristol b) SW Bristol Permanent premolar teeth collected from school dental clinics in Bristol, United Kingdom. METALS; LEAD; ZINC; CADMIUM; COPPER; TEETH; CHILDREN; UNITED KINGDOM	Stack, M.V. Burkitt, A.J. Nickless, G. 1975
3185 Teeth		AAS	35	1210-3950 ppm	1620 ppm	Cambridge, MA schoolchildren TRACE ELEMENTS; METALS; STRONTIUM; LEAD; SODIUM; MAGNESIUM; ZINC; FLUORIDE; MASSACHUSETTS; CHILDREN; TEETH; MEASUREMENT METHODS	Brudevold, F. Reda, A. Aamenden, R. Bakhas, Y. 1975
3186 Urine	Dermal Inhalation		1	806-18520 ug/24 hr	4716.75 ug/24 hr	After Ca-EDTA administration 49-yr-old chemical plant worker (1966 to 1975) exposed to CdS, selenide dust, some soluble Cd compounds. Treated for Pb poisoning, 1965. Lassitude, insomnia, lightheadedness, headache, muscle aches, joint pain, paresthesia in fingers, impotence, significant weight loss. Mild liver enlargement with possible cirrhotic pattern and calcified granuloma on left lung. METALS; CADMIUM; LEAD; SELENIUM; ZINC; BLOOD; URINE; KIDNEYS; METAL POISONING; OCCUPATIONAL HAZARDS; ADULTS	Lerner, S. Hong, C.D. Bozian, R.C. 1979
3187 Urine	Ingestion	AAS	a) 16 b) 16	a) 22.9-55.7 ug/hr b) 36.2-53.7 ug/hr	a) Not applicable b) Not applicable	a) Control, 0 and 24 hr after 50 mg Zn b) Cirrhotic, 0 and 24 hr after 50 mg Zn Both groups fasted before Zn. Controls, patients with alcoholic cirrhosis. ZINC; CIRRHOSIS; URINE; BLOOD; NEBRASKA; WEST VIRGINIA; SURGERY; CALCIUM; MAGNESIUM; COPPER; TRACE ELEMENTS; DRUGS; METALS; LIVER; DISEASES	Sullivan, J.F. Jetton, M.M. Burch, R.E. 1979

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Zinc
7440-66-6
Zn
AEW 65.38, BP 419.5 C, BP 900 C, VP 1 mm Hg at 487 C, 10 mm Hg at 590 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3988 Urine		NA	a) 1 b) 1	a) 382-750 ug/24 hr b) 85-177 ug/24 hr	a) 662 ug/24 hr b) 131 ug/24 hr	a) Healthy male, 6 samples over 9 mo b) Healthy female, 2 samples 10 mo apart Additional data available. METALS; TRACE ELEMENTS; ARSENIC; BROMINE; CALCIUM; CHLORINE; COBALT; CHROMIUM; CESIUM; COPPER; MERCURY; IODINE; POTASSIUM; MANGANESE; SODIUM; RUBIDIUM; SELENIUM; ZINC; URINE; MEASUREMENT METHODS	Cornelis, R. Speecke, A. Hoste, J. 1975
3989 Urine	Ingestion	AAS	a) 47 b) 33	a) Not given b) Not given	a) 208.3 + or - 14.8 ug/24 hr b) 157.3 + or - 14.2 ug/24 hr	a) Boys, base-line value b) Girls, base-line value Boys' level higher than girls' (P<0.01) 50% of children (control) received non-Zn fortified cereal and 50% (test) received fortified cereal which provided 2.5? extra mg Zn per day. After 9 mo no significant difference in urine Zn of control and test groups. Healthy children 33-90 mo old (mean age 57.9 mo), from middle income families, enrolled in private preschool and kindergarten in Denver, 1975. METALS; TRACE ELEMENTS; ZINC; COMPARATIVE EVALUATIONS; BLOOD PLASMA; HAIR; SALIVA; URINE; CHILDREN; SEX; DIETS; COLORADO	Hambidge, K.M. Chavez, M.N. Brown, R.M. Walravens, P.A. 1979
3990 Urine	Ingestion	AAS	8	0.49-0.56 mg/day	Not given	Mean values all groups during 4 experimental periods of 4 days each. Subjects received 10.99 (10.52-11.16) mg Zn/day with basal diet or with basal diet plus 14.2 g/day supplement cellulose, hemicellulose or pectin. Small changes in serum content or urinary excretion due to extra fiber, significant changes in fecal mineral loss. Healthy adolescent boys METALS; TRACE ELEMENTS; MINERALS; COPPER; ZINC; MAGNESIUM; BLOOD SERUM; URINE; FECES; ADOLESCENTS; FIBERS, COMPARATIVE EVALUATIONS; NEBRASKA	Drews, L.R. Kies, C. Fox, H.M. 1979
3991 Urine		AAS	12	a) Not given b) Not given	a) 0.8 + or - 0.1 mg/day b) 0.6 + or - 0.1 mg/day	a) Low fiber diet b) High fiber diet Men 37 to 50 yr old. Mean daily balance +1.5 mg on low-fiber diet and -0.9 mg on high-fiber diet. ADULTS; URINE; METALS; TRACE ELEMENTS; DIETS; FIBERS	Kelsay, J.L. Jacob, R.A. Prather, E.S. 1979

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Zinc
7440-66-6
Zn
AtW 65.38, MP 419.5 C, BP 908 C, VP 1 mm Hg at 487 C, 10 mm Hg at 598 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3192 Urine	Ingestion	AAS	9	a) Not given b) Not given c) Not given	a) 0.66 + or - 0.04 mg/day b) 0.60 + or - 0.07 mg/day c) 0.42 + or - 0.03 mg/day	a) 9 studies, 21 days each - 10.1 mg Zn plus 200 mg Ca/day b) 6 studies, 24 days each - 13.0 mg Zn plus 600 mg Ca/day c) 1 study, 18 days - 13.6 mg Zn plus 1700 mg Ca/day Mean + or - S.E. 1 study equivalent of 1 case Balance and other data available. 7 patients with psychoneurosis, 1 with hypercalciuria, and 1 with Paget's disease, 41-63 yr old. All in good physical condition. METALS; TRACE ELEMENTS; MINERALS; CADMIUM; COPPER; MANGANESE; ZINC; COMPARATIVE EVALUATIONS; FECES; URINE; ADULTS; DIETS; METABOLISM; ILLINOIS	Spencer, H. Rasussen, C.E. Holtzman, N.B. Kramer, L. 1979
3193 Urine		AAS	22	a) Not given b) Not given	a) 53.5 + or - 35.5 ug/100 ml b) 106.0 + or - 58.7 ug/100 ml	a) Storage battery workers before treatment with zinc and vitamin C b) Storage battery workers after 24 wk treatment with zinc and vitamin C Workers, aged 28-60 yr, in battery plant 8-38 yr. 180 controls with no known Pb exposure. LEAD; ZINC; COPPER; METALS; TRACE ELEMENTS; BLOOD; BLOOD SERUM; IRON; HEMOGLOBIN; URINE; DIETS; VITAMIN C	Papaioannou, P. Sohler, A. Pfeiffer, C.C. 1978
3190 Urine	Injection	AAS	9	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 1792 + or - 520 ug/24 hr b) 1903 + or - 393 ug/24 hr c) 1607 + or - 765 ug/24 hr d) 913 + or - 116 ug/24 hr e) 709 ug/24 hr (58)	a) Week 1 b) Week 2 c) Week 3, 6 subjects d) Week 8, 3 subjects e) Week 9, 2 subjects Daily excretion for successive weeks during total parenteral nutrition with a solution containing 200-800 ug/l Zn. Excretion increased in postoperative group monitored wk 1-3. Cancer patients, ages 12-63 yr, mean weight loss of 18.9 + or - 3.2% from pre-illness weight. ZINC; COPPER; METALS; MINERAL METABOLISM; BLOOD SERUM; URINE; NEOPLASMS; DIETS	Lorry, S.F. Goodgame, J.T. Smith, J.C. Baker, S.S. Babcock, R.W. Benkin, E.I. Brennan, M.F. 1979

Zinc, (dihydrogen 3,7,12,17-tetraethyl-8,13-divinyl-2,18-porphinedipropionato(2-))- (8 CI)
Zinc, (7,12-diethenyl-3,8,13,17-tetramethyl-21H,23H-porphine-2,18-dipropanoato(2-)-N(21),N(22),N(23),N(24))-, (SP-4-2)- (9 CI)
15442-68-5
C34-H30-N4-O4-Zn.2H
MP 426.83

TISSUE	EXPOSURE SOURCE	ANALYTICAL METHOD	SOURCE OF CASES	BLOOD	MEAN	GENERAL INFORMATION	REFERENCE
3095 Blood		Fluorometry	a) 1295 b) 385	a) 62-87 umoles/mole b) 58->1000 umoles/mole	a) Not given b) Not given	a) Reference population b) Occupational exposure to lead for zolo hemoglobin. Danish men occupationally exposed to Pb. PROTOPORPHYRINS; LEAD; OCCUPATIONAL HAZARDS; SPECTROSCOPY METHODS; BLOOD; HEMOGLOBINS; METABOLITES; DENMARK; ADULTS	Grandjean, P. 1979
3196 Blood			28	98-248 ug/dl	56.2 ug/dl	Iron workers exposed to lead oxide. More data available. Iron workers repairing an elevated railroad network in New York City. LEAD; ZINC; METALS; TRACE ELEMENTS; PROTEINS; BLOOD; OCCUPATIONAL HAZARDS; NEW YORK	Fischbein, A. Lilis, R. 1977

1-(4'-Fluorophenyl)-4-(cyclohexyl-1'-piperazinyl-4'-carboxylate-butan-1-one hydrochloride (No postings in CHEMLINE).

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3197 Blood, plasma	Ingestion	Radiometry	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 0.29 mg equiv/ml b) 0.16 mg equiv/ml c) 1.43 mg equiv/ml d) 0.24 mg equiv/ml e) 0.31 mg equiv/ml f) 0.04 mg equiv/ml	a) Total radioactivity at 0.25 hr b) Free base concentration at 0.25 hr c) Total radioactivity at 1.0 hr d) Free base concentration at 1.0 hr e) Total radioactivity at 6.0 hr f) Free base concentration at 6.0 hr. After a 50-mg (0.7 mg/kg, 49.5 mCi) dose. Healthy male subject (aged 51 yr, wt 75 kg). DRUGS; METABOLITES; URINE; BLOOD PLASMA	Haskins, D.R. Moore, D.H. Chasmeaud, L.P. 1977
3198 Urine	Ingestion	Radiometry	1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 58.8 % b) 16.5 % c) 5.7 % d) 3.3 %	a) 0-12 hr b) 12-24 hr c) 24-48 hr d) 48-120 hr. After 50-mg (0.7 mg/kg, 49.5 mCi) dose. Healthy male subject (age 51 yr, wt 75 kg). DRUGS; METABOLITES; URINE; BLOOD PLASMA	Haskins, D.R. Moore, D.H. Chasmeaud, L.P. 1977

1-Butanone, 1-(10-[3-(4-methyl-1-piperazinyl)propyl]phenothiazin-2-yl)- (8 CI)
1-Butanone, 1-(10-[3-(4-methyl-1-piperazinyl)propyl]-10H-phenothiazin-2-yl)- (9 CI)
61D-83-2
C26-H31-N3-O-S
MW 409.60, BP 270-290 C at 0.05 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3199 Blood, cells	Ingestion	Fluorometry	12	17-78 ng/ml	Not given	Dose of 80 mg/day Chronic schizophrenics, each with drug-free washout of 2 wk. DRUGS; DRUG THERAPY; BLOOD PLASMA; ERYTHROCYTES; HORMONES; NERVOUS SYSTEM DISEASES; SEX; ADULTS	Smith, R.C. Tamminga, C.A. Crayton, J.W. Dekirmenjian, H. Davis, J.M. 1979
3200 Blood, plasma	Ingestion	Fluorometry	8	0-592 ng/ml	119.8 ng/ml	Daily doses, 40-160 mg Chronic schizophrenics, each with a drug-free washout period of 2 wk. DRUGS; DRUG THERAPY; BLOOD PLASMA; ERYTHROCYTES; HORMONES; NERVOUS SYSTEM DISEASES; SEX; ADULTS	Smith, R.C. Tamminga, C.A. Crayton, J.W. Dekirmenjian, H. Davis, J.M. 1979

1-Naphthol (8 CI)
1-Naphthalenol
90-15-3
C10-H8-O
MW 144.16, MP 96 C (prisms), BP 288 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3201 Urine			a) 11 b) 10 c) 9	a) 6.2-78.8 ppm b) Not detected-8.91 ppm c) 0.07-2.25 ppm	a) Not given b) Not given c) Not given	a) Pesticide formulators at a carbaryl plant without protective clothing b) Pesticide formulators at a carbaryl plant who wore protective clothing c) Farmers PESTICIDES; ORGANOPHOSPHATES; PHENOLS; METABOLITES; URINE; NORTH CAROLINA; COMPARATIVE EVALUATIONS	Shafik, M.T. Bradway, D.E. 1976

3-Penten-2-yn-1-ol, 1-chloro-3-ethyl-
113-18-8
C7-H9-Cl-O
MW 144.61, BP 173-174 C, also reported as 181 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3202 Blood			1	Not applicable	4 ug/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; BRAIN; LIVER; BILE; DRUG ABUSE	Sick, T.J. 1978
3203 Blood			63	0.5-83.0 ug/ml	22.7 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; STAR; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3204 Blood, plasma	Ingestion	GC	1	a) 91.5-99.2 ug/l b) 67.8-12 ug/l	a) Not applicable b) Not applicable	a) 0 and 210 min of perfusion through a 450-g Amberlite XAD-4 cartridge, started 16 hr after admission b) 25.5 and 130 hr after end of hemoperfusion. 99.2 ug/l at 19.5 hr after hemoperfusion. Linear decline from peak. 18-yr-old male, in stage 4 coma, had ingested 22.5 g ethchlorvynol, 1.5 g oxazepam, 360 mg florazepam, 540 mg phenobarbital, and 600 mg diphenhydramine. DRUGS; DRUG ABUSE; HYPNOTICS; SEDATIVES; SUICIDE; LAVAGE; BLOOD PLASMA; CASE HISTORIES; ANTICONVULSANTS; TRANQUILIZERS	Benowitz, N. Abolin, C. Toner, T. Rosenberg, J. Rogers, W. Pond, S. Schoenfeld, P. Humphreys, M. 1980
3205 Liver			1	Not applicable	50 ug/100 g	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; BRAIN; LIVER; BILE; DRUG ABUSE	Sick, T.J. 1978

1-Piperidinebutanamide, 4-(4-chlorophenyl)-4-hydroxy-N,N-dimethyl-alpha,alpha-diphenyl-
53179-11-6
C29-H33-Cl-N2-O2
MW 477.04, MP Hydrochloride, 222.223 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3206 Blood, serum	Ingestion	RIA	a) 6 b) 6	a) Not given b) Not given	a) 2.19 + or - 0.36 ng/ml b) 2.26 + or - 0.42 ng/ml	a) Peak, 2.4 + or - 0.7 hr after 8 g dose in syrup b) Peak, 5.2 + or - 0.3 hr after 8 g dose in capsules Biological availability same for syrup or capsules. 6 healthy male volunteers ages 36-43 yr. DRUGS; DRUG THERAPY; COMPARATIVE EVALUATIONS; BLOOD SERUM; NEW JERSEY; ADULTS; NEUROMUSCULAR DISEASES	Killinger, J.H. Weintraub, H.S. Fuller, B.L. 1979

1,1'-Biphenyl, 2,2',3,3',4,4',5-heptachloro-
35065-30-6
C12-H3-Cl7
395

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3207 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.28 ppb b) 0.11 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

1,1'-Biphenyl, 2,2',3,4,4',5,5'-heptachloro-
35065-29-3
C12-H3-Cl7
RN 395

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3208 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.44 ppb b) 0.12 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

1,1'-Biphenyl, 2,2',3,4,4',5'-hexachloro-
35065-29-2
C12-H4-Cl6
MW 361

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3209 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.65 ppb b) 0.17 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University. JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

1,1'-Biphenyl, 2,2',4,4',5,5'-hexachloro-
35065-27-1
C12-H4-Cl6
BN 361

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3210 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.52 ppb b) 0.15 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University. JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

1,1'-Biphenyl, 2,3,3',4,4',5-hexachloro
38380-08-4
C12-H4-C16
RN 361

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3211 Blood		GC	a) 9 b) 7	a) Not given b) Not given	a) 0.28 ppb b) 0.04 ppb	a) Yusho patients b) Controls Patients with Yusho and normal persons from the hospital of Kyushu University JAPAN; BLOOD; BIOACCUMULATION; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BIPHENYL COMPOUNDS; FOOD CONTAMINATION	Kuroki, H. Masuda, Y. 1977

1,3,4-Metheno-2H-cyclobuta(cd)pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
143-50-0
C10-Cl10-O
MW 490.68, VP <3E10(E-7) mm Hg at 25 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3212 Adipose			1	Not applicable	4,051 ng/g	5 months after last known exposure. 46-yr-old man exposed to chlordecone for 6 months. T-tube implant in common bile duct. PESTICIDES; BILE; METABOLITES; VIRGINIA; FECES; BLOOD; ADIPOSE TISSUE; INDUSTRIAL PLANTS; BIOACCUMULATION; RATS; COMPARATIVE EVALUATIONS; SURGERY	Boylan, J.J. Cohn, W.J. Egle, J.L., Jr. Blanke, R.V. Guzelian, P.S. 1979
3213 Bile		GC-EC	1	a) 165-195 ug/24 hr b) 260-265 ug/24 hr c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) 180 ug/24 hr b) 262.5 ug/24 hr c) 365 ug/24 hr d) 469 ug/24 hr e) 235 ug/24 hr f) 312 ug/24 hr	a) Chlordecone in bile diverted from duodenum b) Chlordecone alcohol in bile diverted from duodenum c) Chlordecone, with reinfusion of 90% of bile into duodenum d) Chlordecone alcohol, with reinfusion of 90% bile into duodenum e) Chlordecone, with reinfusion plus 24 g/day cholestyramine resin f) Chlordecone alcohol, with reinfusion plus 24 g/day cholestyramine resin All samples pretreated with glucuronidase. Values for feces available. 46-yr-old man exposed to chlordecone for 6 months. T-tube implant in common bile duct. PESTICIDES; BILE; METABOLITES; VIRGINIA; FECES; BLOOD; ADIPOSE TISSUE; INDUSTRIAL PLANTS; BIOACCUMULATION; RATS; COMPARATIVE EVALUATIONS; SURGERY	Boylan, J.J. Cohn, W.J. Egle, J.L., Jr. Blanke, R.V. Guzelian, P.S. 1979
3218 Blood			1	Not applicable	680 ng/ml	5 months after last known exposure. Minimum detectable level, 5 ng/ml. 46-yr-old man, exposed to chlordecone for 6 months. T-tube implant in common bile duct. PESTICIDES; BILE; METABOLITES; VIRGINIA; FECES; BLOOD; ADIPOSE TISSUE; INDUSTRIAL PLANTS; BIOACCUMULATION; RATS; COMPARATIVE EVALUATIONS; SURGERY	Boylan, J.J. Cohn, W.J. Egle, J.L., Jr. Blanke, R.V. Guzelian, P.S. 1979
3215 Blood, plasma		GC-EC	1	Not given	3460 ng/ml	Chlordecone exposed patients, pooled samples. PESTICIDES; BLOOD PLASMA; MEASUREMENT METHODS	Blanke, R.V. Farias, M.N. Griffith, F.D. Guzelian, P. 1977

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, endo,exo- (8 CI)
1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)- (9 CI)
309-00-2
C12-H8-Cl6
MW 364.93, MP 104 C, VP 6X10(E-6) mm Hg at 25 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3216 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.13 ppm b) 0.10 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.E. Clausen, J. 1979
3217 Milk		GC TLC	1	Not applicable	21.8 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976
3218 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 3.6% b) 7.8%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3219 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) 0.0003-0.1180 ppm b) <0.0001-0.0940 ppm c) 0.0140-0.8020 ppm d) <0.0001-0.0143 ppm e) <0.0001-0.1250 ppm f) 0.0131-0.2330 ppm	a) 0.0305 ppm b) 0.0183 ppm c) 0.1630 ppm d) 0.0033 ppm e) 0.0240 ppm f) 0.0960 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Data available for intermediate age groups. Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, D. 1974
3220 Adipose		CC GC	168	0.001-0.353 ug/g	0.069 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, H.W. Davies, D.J.A. 1977
3221 Adipose			a) 1412 b) 898	a) < or = 15.20 ppm b) < or = 2.21 ppm	a) 0.18 ppm b) 0.15 ppm	a) FY 1970 b) FY 1974 Concentrations on lipid basis. Postmortems and biopsies throughout U.S. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; UNITED STATES	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3222 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) 0.0042-0.2976 ppm b) 0.0028-0.0582 ppm c) 0.0048-0.5882 ppm d) 0.0024-0.0938 ppm	a) 0.027 ppm b) 0.0228 ppm c) 0.0378 ppm d) 0.0215 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-C16-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3223 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.33 ppm b) 0.43 ppm c) 0.35 ppm d) 0.34 ppm e) 0.38 ppm f) 0.27 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
3224 Adipose		GC	70	0-0.53 mg/kg extractable fat	0.16 mg/kg extractable fat	Abdominal tissue Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Acutime necropsies of adult subjects >24 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Farlog, O. 1976
3225 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.13 ppm b) 0.12 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies, levels increased with age b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, G.E. Clausen, J. 1979
3226 Adipose			1	Not applicable	0.10 ppm	Concentration unchanged 4-50 days after ingestion of 170.1 g 75% dichlofenthion. Suicide attempt by 62-yr-old male. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, R.E. Vaclavek, C. 1975

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3227 Blood		GC	a) 109 b) 497	a) 1-25 ppb b) Not given	a) 5 ppb b) 1.5 ppb	a) Samples in which dieldrin was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; IDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975
3228 Blood, serum		GC-EC	a) 47 b) 13 c) 1	a) 5-140 ppb b) 5-14 ppb c) Not applicable	a) 43.5 ppb b) 10.1 ppb c) 5.0 ppb	a) Males, households with one or more members in pesticide industry b) Females, households with one or more members in pesticide industry c) Controls (males) Household dust levels 1.59-40.42 ppm (a-b) and 1.59-10.21 ppm (c). Residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
3229 Brain		GC	21	0-0.20 mg/kg extractable fat	0.057 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects >20 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976
3230 Liver		GC	18	0-1.07 mg/kg extractable fat	0.29 mg/kg extractable fat	Samples from adult males generally had highest concentrations. Sex differences significant at 95% level in several cases. Routine necropsies of adult subjects >20 yr old and 2 stillborns in Denmark. PESTICIDES; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; BRAIN; LIVER; COMPARATIVE EVALUATIONS; ADULTS; NEWBORN; DENMARK; SEX	Kraul, I. Karlog, O. 1976

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.75X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3231 Milk			57	Trace-0.05 ppm	<0.01 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; NONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Futz, F.W. Strassman, S.C. Yobs, A.R. 1976
3232 Milk		GC TLC	6 of 50	0.3-3.6 ppb	2.75 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976
3233 Milk		GC	2 of 51	Not given	0.014 ppm	Random subjects of greater St. Louis, MO, metropoliton area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbruster, J. Kettelhut, L.L. Drucker, B. 1977
3234 Milk		GC	a) 20 b) 12 c) 40 d) 38 e) 19 f) 20 g) 19	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given	a) 0.1 ppm, fat basis b) 0.15 ppm, fat basis c) 0.17 ppm, fat basis d) 0.18 ppm, fat basis e) 0.20 ppm, fat basis f) 0.1 ppm, fat basis g) 0.14 ppm, fat basis	a) 1971 b) 1972 c) 1973 d) 1974 e) 1975 f) 1976 g) 1977 Estimated from graph Mothers in Osaka Prefecture BIPHENYL COMPOUNDS; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEXACHLOROCYCLOHEXANE; JAPAN; MILK; POLYCHLORINATED BIPHENYLS	Yakushiji, T. Watanabe, I. Kuwabara, K. Yoshida, S. Hori, S. Fukushima, S. Kashimoto, T. Koyama, K. Kunita, N. 1979
3235 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-6 ng/g	a) 2 ng/g b) 1 ng/g c) 2/ ng/g d) 1 ng/g e) 2 ng/g f) 2 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3236 Milk		GC	a) 27 b) 10 c) 10 d) 40	a) 0-0.010 ppm b) Not given c) Not given d) 0.001-0.015 ppm	a) 0.002 ppm b) 0.005 ppm c) 0.070 ppm d) 0.005 ppm	a) Cotton, corn, and sesame-growing area b) Banana area c) Cotton area d) Coffee-growing area, El Salvador a)-c) in Guatemala. Highest use of pesticides on cotton. Mothers from low-income families in Guatemala and El Salvador, areas chosen to represent different degrees of use of pesticides. Overuse of pesticides a particular problem in tropical countries. Prevalence of malnutrition may contribute to health effects. AGRICULTURE; CHLORINE ORGANIC COMPOUNDS; CROP DUSTING; DDT; DIELDRIN; EL SALVADOR; FOOD CONTAMINATION; GUATEMALA; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; INSECTICIDES; MILK; NUTRITIONAL DEFICIENCIES; PESTICIDES; PESTICIDE RESIDUES	de Campos, M. Olszyna-Marzys, A.E. 1979
3237 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-4.66 ppm b) Not detectable-0.081 ppm	a) 0.180 ppm b) 0.025 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, T.W. Breithreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979
3238 Milk, fat		GC-EC	a) 34 b) 6	a) 0.04-0.62 ppm b) 0.03-0.17 ppm	a) 0.15 ppm b) 0.120 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, H.W. D'Ercole, A.J. Cain, J.D. Arthur, H.D. 1979
3239 Milk, whole		GC-EC	22	0.003-0.011 ppm	0.008 ppm	Survey, Western Australia, 1970-1971 22 nursing mothers, wt 46-66 kg, living within a 30 mi radius of Perth, Western Australia MILK; PESTICIDES; AUSTRALIA; DDT; DDE; DIELDRIN; HEXACHLOROBENZENE	Stacey, C.I. Thomas, B.W. 1975

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1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-, endo,exo- (8 CI)
2,7:3,6-Dimethanonaphth(2,3-b)oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)- (9 CI)
60-57-1
C12-H8-Cl6-O
MW 380.93, MP 176-177 C, VP 7.78X10(E-7) mm Hg at 20 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3240 Urine	Injection Dermal	Radiometry	6	a) Not given b) Not given	a) 3.3% b) 7.7%	a) IV dose of 1 uCi b) Topical administration of 1-5 uCi Percentage of dose excreted in 120 hr. Data in b) corrected for incomplete recovery based on data in a). Healthy volunteers. PESTICIDES; HERBICIDES; ORGANOPHOSPHATES; CHLORINE ORGANIC COMPOUNDS; URINE; HEXACHLOROCYCLOHEXANE	Feldmann, R.J. Maibach, H.I. 1974

1alphaH,5alphaH-Nortropane-2beta-carboxylic acid, 3beta-hydroxy-, methyl ester, benzoate (ester) (8 CI)
8-Azabicyclo(3.2.1)octane-2-carboxylic acid, 3-(benzoyloxy)-, methyl ester, (1R-(exo,exo))- (9 CI)
18717-72-1
C16-H19-N-04
MW 289.34, MP 86-92 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3241 Urine	Injection	GC/MS	3	a) 1.15-8.0 ug b) 3.20-4.22 ug c) 0.26-1.63 ug	a) 4.11 ug b) 3.68 ug c) 0.93 ug	a) 0-2 hr b) 2-4 hr c) 4-6 hr After 100 mg cocaine IV. Adult patients. DRUGS; ADULTS; URINE; MEASUREMENT METHODS	Jindal, S.P. Lutz, T. Vestergaard, P. 1978

1alphaH,5alphaH-Tropane-2beta-carboxylic acid, 3beta-hydroxy-, benzoate (ester) (8 CI)
8-Azabicyclo(3.2.1)octane-2-carboxylic acid, 3-(benzoyloxy)-8-methyl-, (1R-(exo,exo))- (9 CI)
519-09-5
C16-H19-N-04
MW 289.34, MP Tetrahydrate 86-92 C (decomp 195 C, dry)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3242 Bile		GC	2	0.36-3.0 mg/dl	1.68 mg/dl	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3243 Blood		GC	3	0.14-0.76 mg/dl	0.42 mg/dl	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3244 Brain		GC	1	Not applicable	0.3 mg/100 g	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3245 Liver		GC	2	0.25-0.9 mg/100 g	0.58 mg/100 g	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3246 Lung		GC	1	Not applicable	0.40 mg/100 g	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3247 Urine		GC	1	Not applicable	10.0 mg/dl	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978

1alpha H,5alpha H-Tropane-2beta-carboxylic acid, 3beta-hydroxy-, methyl ester, benzoate (ester) (8 CI)
8-Azabicyclo(3.2.1)octane-2-carboxylic acid, 3-(benzyloxy)-8-methyl-, methyl ester, (1R-(exo,exo))- (9 CI)
50-36-2
C17-H21-N-04
MW 303.35, MP 98 C, BP 187-188 C at 0.1 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3248 Bile		GC	2	0.82-7.6 ug/dl	4.21 ug/dl	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3249 Blood		GC	3	<0.02-0.17 ug/dl	Not given	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3250 Blood		Immunoenzymatic		122-125 ug/100 ml	Not given	Toxicology cases. Range, 2 solvent extraction systems. DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAMS; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
3251 Blood, plasma	Ingestion	GC/MS	6	11-149 ng/ml	76.67 ng/ml	Peaks Indians and Eurasians, 33-58 yr and 62-88 kg. DRUGS; BLOOD; ADULTS; SOUTH AMERICA	Holmstedt, B. Lindgren, J.E. Rivier, L. Plowman, T. 1979
3252 Blood, plasma	Inhalation Injection	GC	10	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given g) Not given h) Not given i) Not given j) Not given k) Not given l) Not given m) Not given n) Not given o) Not given	a) 221 ng/ml b) 109 ng/ml c) 21 ng/ml d) 308 ng/ml e) 170 ng/ml f) 49 ng/ml g) 19 ng/ml h) 53 ng/ml i) 16 ng/ml j) 80 ng/ml k) 115 ng/ml l) 27 ng/ml m) 128 ng/ml n) 206 ng/ml o) 117 ng/ml	a) 5 min after 16 mg iv b) 30 min after 16 mg iv c) 120 min after 16 mg iv d) 5 min after 32 mg iv e) 30 min after 32 mg iv f) 120 min after 32 mg iv g) 10 min after 16 mg intranasal h) 60 min after 16 mg intranasal i) 120 min after 16 mg intranasal j) 10 min after 64 mg intranasal k) 30 min after 64 mg intranasal l) 120 min after 64 mg intranasal m) 10 min after 96 mg intranasal n) 30 min after 96 mg intranasal o) 120 min after 96 mg intranasal Adults with histories of intravenous cocaine use. DRUGS; BLOOD PLASMA; COMPARATIVE EVALUATIONS; EXPERIMENTAL PSYCHOLOGY; ADULTS; ILLINOIS	Javaid, J.I. Fischman, M.W. Schuster, C.R. Dekirmenjian, H. Davis, J.M. 1978
3253 Blood, plasma	Ingestion Intranasal	GC	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.0 ng/ml b) 209.8 ng/ml c) 6.2 ng/ml d) 36.2 ng/ml e) 160.6 ng/ml f) 35.6 ng/ml	a) 15 min after oral dose b) 60 min peak after oral dose c) 360 min after oral dose d) 15 min after nasal dose e) 60 min peak after nasal dose f) 240 min after nasal dose Initial doses 2.0 mg/kg body wt Healthy volunteers aged 25-32 yr with previous recreational cocaine use. DRUGS; BLOOD PLASMA; ADULTS	Van Dyke, C. Jatlow, P. Ungerer, J. Barash, P.G. Byck, R. 1978

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1alphaH,5alphaH-Tropane-2beta-carboxylic acid, 3beta-hydroxy-, methyl ester, benzoate (ester) (8 CI)
8-Azabicyclo(3.2.1)octane-2-carboxylic acid, 3-(benzoyloxy)-8-methyl-, methyl ester, (1R-(exo,exo))- (9 CI)
50-36-2
C17-H21-N-O4
MW 303.35, MP 98 C, BP 187-188 C at 0.1 mm Hg

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3254 Brain		GC	1	Not applicable	0.9 mg/100 g	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; CRIME; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3255 Liver		GC	2	0.03-0.11 mg/100 g	0.07 mg/100 g	Cocaine-related deaths Postmortem samples from overdose fatalities involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3256 Lung		GC	1	Not applicable	0.9 mg/100 g	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3257 Urine		GC	1	Not Applicable	1.1 mg/dl	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3258 Urine	Injection	GC/MS	3	a) 210.9-578.2 ug b) 25.4-177.2 ug c) 14.4-38.2 ug	a) 341.8 ug b) 110.8 ug c) 22.7 ug	a) 0-2 hr b) 2-4 hr c) 4-6 hr After 100 mg IV. Adult patients. DRUGS; ADULTS; URINE; MEASUREMENT METHODS	Jindal, S.P. Lutz, T. Vestergaard, P. 1978

1H-Isoindol-1-one, 2,3-dihydro-3-(2-hydroxy-3-((1-methylethyl)amino)propoxy)-2-phenyl-, (R*,S*)-(+-)-, (E)-2-butenedioate (1:1) (salt)
70096-18-9
C20-H24-N2-O3.C4-H4-O4
MW 456.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3259 Blood, serum	Injection Ingestion	GC-EC	a) 1 b) 1 c) 1 d) 1	a) 0.5-0.006 ug/ml b) 0.07-0.011 ug/ml c) 0.2-0.021 ug/ml d) 0.39-0.048 ug/ml	a) Not given b) Not given c) Not given d) Not given	a) IV, 1 mg/kg, 30 min, 9 hr b) Oral, 50 mg, 2.0 hr, 12 hr c) Oral, 100 mg, 1.5 hr-12 hr d) Oral, 150 mg, 1.5-12 hr Estimated from graph. DRUGS; BLOOD SERUM; MEASUREMENT METHODS; FRANCE; ANTIARRHYTHMIC AGENTS	Heusse, D. Populaire, P. Renard, A. Pasquier, P. Gregoire, J. 1980

1H-Pyrazolo(3,4-d)pyrimidine-4,6(5H,7H)-dione
2465-59-0
C5-H4-N4-O2
MW 152.13

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3260 Blood, serum		Colorimetry Enzymatic	13	0.9X10(E-6)-9X10(E-5) M	3X10(E-5) M	Long-term treatment with 300 mg allopurinol daily (orally), 4 to 24 hr after last dose, measured as the metabolite. Patients with lymphoma or other solid tumors. DRUGS; BLOOD SERUM; NEOPLASMS; URINE; ENZYMES; METABOLISM; METABOLITES	Hande, K. Reed, W. Chabner, B. 1978

1H-1,5-Benzodiazepine-2,4(3H,5H)-dione, 7-chloro-1-methyl-5-phenyl-
22316-47-8
C16-H13-Cl-N2-O2
MW 300.74, MP crystals 180-182 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3261 Blood	Ingestion	Fluorometry	15	3.24-836.4 ng/ml	Not given	Clobazam + N-desmethyl metabolite, 0 and 2 hr after 40 mg, 352.3 ng/ml at 6 hr, final value. 15 males Pupil constriction at peak blood levels. DRUGS; DRUG THERAPY; BLOOD; GEORGIA; BEHAVIOR DISORDERS; DIAZEPAMS; PSYCHOTROPIC DRUGS; COMPARATIVE EVALUATIONS	Kotzan, J.A. Needham, T.E. Honigberg, I.L. Vallner, J.J. Stewart, J.T. Brown, W.J. Jun, H.W. 1979
3262 Blood, plasma	Ingestion	Fluorometry	15	a) 431-953 ng/ml b) 398-1395 ng/ml c) 276-706 ng/ml	a) 593 ng/ml b) 663 ng/ml c) 579 ng/ml	a) Administered as tablet, mean peak time 1.48 hr b) Administered as capsule, mean peak time 1.75 hr c) Administered in solution, mean peak time 0.87 hr Peak levels after 40 mg doses Differences not significant Other data available. Healthy, drug-free adults, 18-23 yr old, 155-175 lb Pupil diameter measurements after ingestion of drug correlated with plasma levels. DRUGS; DRUG THERAPY; BENZODIAZEPINES; IN VIVO ANALYSIS; COMPARATIVE EVALUATIONS; BLOOD PLASMA; GEORGIA	Vallner, J.J. Needham, T.E. Jun, H.W. Brown, W.J. Stewart, J.T. Kotzan, J.A. Honigberg, I.L. 1978

17alpha-Estradiol (9 CI)
Estra-1,3,5(10)-triene-3,17-diol, (17alpha)- (9 CI)
57-91-0
C18-H24-O2
MW 272.37, MP 220-223 C (needles with 0.5 H2O from 80% alcohol)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3263 Urine		GC	a) 12 b) 3 c) 3	a) Not given b) Not given c) Not given	a) 31.7 ug/24 hr b) 48.6%/24 hr c) 36.1%/24 hr	a) Postmenopausal subjects given conjugated estrogen tablets daily for 21 days b) Postmenopausal subjects given conjugated estrogen tablets (1.25 mg) daily for 21 days c) Postmenopausal subjects given conjugated estrogen tablets (2.50 mg) daily for 21 days Mean is average of means for days 17, 18, 19. Endogenous level also available. 12 healthy females, aged 37 to 57 yr, at 54-73 kg. HORMONES; STEROIDS; URINE; SEX; MEASUREMENT METHODS	Johnson, R.N. Masserano, B.P. Kho, B.T. Adams, W.P. 1978

19-Nor-17alpha-preg-4-en-20-yn-3-one, 17-hydroxy- (8 CI)
19-Norpreg-4-en-20-yn-3-one, 17-hydroxy-, (17alpha)- (9 CI)
68-22-4
C20-H26-O2
MP 290.41, MP 161-162 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3264 Blood, plasma	Ingestion Injection	RIA	6	a) 18-0.28 ng/ml b) 4.5-0.2 ng/ml	a) Not given b) Not given	a) Range of means 1 and 24 hr after singel dose of 1 mg norethindrone acetate and 50 ug ethinylestradiol, IV b) Range of means 1.5 and 24 hr after single dose of 1 mg norethindrone acetate and 50 ug ethinylestradiol, oral Biexponential decline. Estimated from graph. Volunteers, 21-23 yr old, fasted before dosing. DRUGS; DRUG THERAPY; UNITED KINGDOM; ADULTS; BLOOD PLASMA; PROGESTOGENS; STEROIDS	Back, D.J. Breckenridge, A.M. Crawford, F.E. McIver, M. Orme, M.L'E. Rowe, P.H Smith, E. 1978

2(1H)-Pyrimidinone, tetrahydro-4-hydroxy-1-beta-D-ribofuranosyl-
10771-50-1
C9-H16-N2-O6
MW 248.27

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3265 Blood, plasma	Injection Ingestion	EM Radiometry	a) 2 b) 2 c) 1	a) 0.25-35 ug/ml b) 0.3-9 ug/ml c) 0.09-0.8 ug/ml	a) Not given b) Not given c) Not given	a) IV, 0 and 24 hr b) SC, 0 and 24 hr c) Oral, 0 and 120 hr low-peak after 200 mg/sq m. Peaks at 0 and 2 hr. 5 patients with malignant melanoma. DRUGS; DRUG THERAPY; CHEMOTHERAPY; TEXAS; ENZYMES; NEOPLASMS; MELANOMAS; BLOOD PLASMA; DISEASES; RADIOISOTOPES; SKIN DISEASES	Ho, D.H.W. Bodey, G.P. Hall, S.W. Benjamin, R.S. Brown, W.S. Freireich, E.J. Loo, T.L. 1978
3266 Urine	Injection Ingestion	EM Radiometry	a) 2 b) 2 c) 1	a) 38-94 % of dose b) 4-87 % of dose c) 1-22 % of dose	a) Not given b) Not given c) Not given	a) IV, 0-24 hr b) SC, 0-24 hr c) Oral, 0-120 hr low-peak after 200 mg/sq m. Peaks at 0-2 hr. 5 patients with malignant melanoma. DRUGS; DRUG THERAPY; CHEMOTHERAPY; TEXAS; ENZYMES; NEOPLASMS; MELANOMAS; BLOOD PLASMA; DISEASES; RADIOISOTOPES; SKIN DISEASES	Ho, D.H.W. Bodey, G.P. Hall, S.W. Benjamin, R.S. Brown, W.S. Freireich, E.J. Loo, T.L. 1978

2(1H)-Pyrimidinone, 4-amino-5-fluoro-
2022-85-7
C4-H4-F-N3-O
MW 129.09, MP 295-297 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3267 Blood, serum	Ingestion Injection	HPLC	a) 5 b) 5 c) 3 d) 3	a) Not given b) Not given c) 20.0-31.7 ug/l d) 22.2-31.2 ug/l	a) 11.2 ug/l b) 8.7 ug/l c) Not given d) Not given	a) Healthy fasting subjects-peak level-40 min after 500 mg orally in aqueous solution b) Healthy fasting subjects-peak level-1 hr after 500 mg orally in capsule c) Patients with renal insufficiency-peak levels-4 hr after 500 or 1000 mg orally in capsule d) Patients with renal insufficiency-peak levels-approximately 10 min after 500 or 1000 mg intravenously Kinetics data available. Subjects with normal renal function 18-40 yr old, 53-73 kg. Patients with renal insufficiency on routine hemodialysis. DRUGS; DRUG THERAPY; FLUORINE COMPOUNDS; COMPARATIVE EVALUATIONS; IN VIVO ANALYSIS; BLOOD SERUM; URINE; METABOLISM; WASHINGTON	Cutler, R.E. Blair, A.D. Kelly, M.B. 1978
3268 Urine	Ingestion Injection	HPLC	a) 3 b) 3 c) 3 d) 3 e) 4	a) Not given b) Not given c) Not given d) Not given e) Not given	a) 255.7 ug/l/48 hr b) 244.8 ug/l/48 hr c) 229.2 ug/l/48 hr d) 212.7 ug/l/48 hr e) 807.1 ug/l/48 hr	a) 500 mg orally in aqueous solution, fasting b) 500 mg orally in capsule, fasting c) 500 mg orally in capsule, after breakfast d) 500 mg orally in capsule, after antacid e) 500 mg intravenously Kinetics data available. Subjects with normal renal function 18-40 yr old. DRUGS; DRUG THERAPY; FLUORINE COMPOUNDS; COMPARATIVE EVALUATIONS; IN VIVO ANALYSIS; BLOOD SERUM; URINE; METABOLISM; WASHINGTON	Cutler, R.E. Blair, A.D. Kelly, M.B. 1978

2-Butanol, 4-(dimethylamino)-3-methyl-1,2-diphenyl-, propionate (ester), (2S,3R)- (8 CI)
Benzeneethanol, alpha-(2-(dimethylamino)-1-methylethyl)-alpha-phenyl-, propanoate (ester), (S-(R*,S*))- (9 CI)
469-62-5
C22-H29-N-O2
MW 339.48, MP 75-76 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3269 Blood		GC	1	Not applicable	1.0 ug/ml	Fatal overdose from tranylcypromine, d-brompheniramine, d-isoephedrine, propoxyphene, alcohol levels of norpropoxyphene also available. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
3270 Blood	Ingestion		a) 27 b) 28 c) 25 d) 20	a) 0.03-3.70 ug/dl b) 0.02-16.3 ug/dl c) 0.03-2.0 ug/dl d) 0.01-0.15 ug/dl	a) 0.77 ug/dl b) 1.25 ug/dl c) 0.55 ug/dl d) 0.05 ug/dl	a) Acute exposures unrelated to drug abuse b) Drug abuse cases c) Cause of death unknown d) Non-propoxyphene related deaths Metabolite norpropoxyphene levels also available. 115 medical examiner cases in Maryland during 1974-1976. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
3271 Blood			231	0.04-53.3 ug/ml	5.1 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3272 Blood	Ingestion	GC TLC	a) 32 b) 30	a) 0.4-22.0 ug/g b) 0.3-50.0 ug/g	a) 3.71 ug/g b) 3.89 ug/g	a) Dextropropoxyphene b) Norpropoxyphene (metabolite) Autopsies of subjects aged 18-75 yr who died from dextropropoxyphene poisoning. DRUGS; BLOOD; MUSCLES; LIVER; URINE; CASE HISTORIES; COMPARATIVE EVALUATIONS; AUTOPSIES; DENMARK	Christensen, H. 1977
3273 Brain	Ingestion	GC	9	0.04-2.70 ug/100 g	Not given	Selected cases--highest levels occurred in overdosing and drug abuse cases. Metabolite norpropoxyphene levels also available. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977

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2-Butanol, 4-(dimethylamino)-3-methyl-1,2-diphenyl-, propionate (ester), (2S,3R)- (8 CI)
Benzeneethanol, alpha-(2-(dimethylamino)-1-methylethyl)-alpha-phenyl-, propanoate (ester), (S-(R*,S*))- (9 CI)
469-62-5
C22-H29-N-O2
MW 339.48, MP 75-76 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3274 Kidney	Ingestion	GC	9	0.07-20.8 mg/100 g	Not given	Selected case histories--highest levels occurred in overdosing and drug abuse cases. Metabolite norpropoxyphene levels also available. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
3275 Liver		GC	1	Not applicable	19 ug/g	Fatal overdose from tranylcypromine, d-brosphenirasine, d-isoephedrine, propoxyphene, alcohol Levels of norpropoxyphene also available. 55 yr old white female. ALCOHOLS; NARCOTICS; DRUGS; BLOOD; URINE; BRAIN; LIVER; ANTIDEPRESSIVE AGENTS; CONNECTICUT; DRUG ABUSE; CASE HISTORIES	Baselt, R.C. Shaskan, E. Gross, E.M. 1977
3276 Liver	Ingestion	GC	9	0.02-24.0 mg/100 g	Not given	Selected case histories--highest levels occurred in overdosing and drug abuse cases. Metabolite norpropoxyphene levels also available. DRUGS; DRUG ABUSE; CASE HISTORIES; BLOOD; BRAIN; LIVER; KIDNEYS; MARYLAND	Caplan, Y.H. Thompson, B.C. Fisher, R.S. 1977
3277 Liver	Ingestion	GC TLC	33	a) 8.0-162.0 ug/g b) 2.2-99.0 ug/g	a) 54.32 ug/g b) 28.92 ug/g	a) Dextropropoxyphene b) Norpropoxyphene (metabolite) Autopsies of subjects aged 18-75 yr who died from dextropropoxyphene poisoning. DRUGS; BLOOD; MUSCLES; LIVER; URINE; CASE HISTORIES; COMPARATIVE EVALUATIONS; AUTOPSIES; DENMARK	Christensen, H. 1977
3278 Muscle	Ingestion	GC TLC	a) 26 b) 22	a) 0.7-53 ug/g b) 0.6-12.0 ug/g	a) 5.8 ug/g b) 3.01 ug/g	a) Dextropropoxyphene b) Norpropoxyphene (metabolite) Autopsies of subjects aged 18-75 yr who died from dextropropoxyphene poisoning. DRUGS; BLOOD; MUSCLES; LIVER; URINE; CASE HISTORIES; COMPARATIVE EVALUATIONS; AUTOPSIES; DENMARK	Christensen, H. 1977
3279 Urine	Ingestion	GC TLC	21	a) 0.7-105.0 ug/g b) 0.3-195.0 ug/g	a) 15.19 ug/g b) 32.09 ug/g	a) Dextropropoxyphene b) Norpropoxyphene (metabolite) Autopsies of subjects aged 18-75 yr who died from dextropropoxyphene poisoning. DRUGS; BLOOD; MUSCLES; LIVER; URINE; CASE HISTORIES; COMPARATIVE EVALUATIONS; AUTOPSIES; DENMARK	Christensen, H. 1977

2-Hexanone
591-78-6
C6-H12-O
MW 100.16, BP 127 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3280 Blood, serum	Inhalation	GC	3	a) Not given b) Not given	a) 0.77 ug/ml b) 0.02 ug/ml	a) Before exposure of 100 ppm b) After exposure of 100 ppm Volunteers 22-53 yr of age. METABOLISM; METABOLITES; URINE; BLOOD SERUM; NEUROLOGIC MANIFESTATIONS	DiVincenzo, G.D. Hamilton, M.L. Kaplan, C.J. Krasavage, W.J. O'Donoghue, J.L. 1978
3281 Urine	Dermal	Radiometry	2	a) Not applicable b) Not applicable	a) 7,470 dpm b) 6,590 dpm	a) Subject 1 b) Subject 2 12-hr excretion of radioactivity after 20 uCi [1-C14]MnBK with 15 ml MnBK. Volunteers 30-53 yr of age. METABOLISM; METABOLITES; URINE; BLOOD SERUM; NEUROLOGIC MANIFESTATIONS	DiVincenzo, G.D. Hamilton, M.L. Kaplan, C.J. Krasavage, W.J. O'Donoghue, J.L. 1978

2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo (8 CI) (VAN)
2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,5,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-, (4S-(4alpha,4aalpha,5alpha,5aalpha,6alpha,12aalpha))- (9 CI)
564-25-0
C22-H24-N2-O8
MW 444.43

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3282 Blood, serum	Injection	Microbiological	28	2.1-13.1 ug/ml	6.4 ug/ml	Surgical specimens, <0.75-4.25 hr after 200 mg, IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; OVARIES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, H.H. Herbst, D.V. King, T.M. 1979
3283 Endometrium	Injection	Microbiological	13	2.5-10.4 ug/g	6.3 ug/g	Surgical specimens 1-3.5 hr after 200 mg, IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; OVARIES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, H.H. Herbst, D.V. King, T.M. 1979
3284 Ovary	Injection	Microbiological	11	2.9-6.0 ug/g	3.5 ug/g	Surgical specimens, 0.75-3.5 hr after 200 mg, IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; OVARIES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, H.H. Herbst, D.V. King, T.M. 1979
3285 Oviduct	Injection	Microbiological	11	2.7-7.4 ug/g	4.1 ug/g	Surgical specimens, 0.75-3.5 hr after infusion of 200 mg, IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; OVARIES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, H.H. Herbst, D.V. King, T.M. 1979
3286 Uterus	Injection	Microbiological	20	a) 2.1-7.3 ug/g b) 1.9-8.1 ug/g	a) 4.0 ug/g b) 4.1 ug/g	a) Cervix, removed 0.75-4.25 hr after 200 mg, IV b) Myometrium, removed 0.75-4.25 hr after 200 mg, IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; OVARIES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, H.H. Herbst, D.V. King, T.M. 1979

2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (+)- (8 CI)
2-Naphthaleneacetic acid, 6-methoxy-alpha-methyl-, (S)- (9 CI)
22204-53-1
C14-H14-O3
MW 230.26, MP 155.3 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3287 Blood, serum	Ingestion	HPLC	10	a) 44.3-76.1 ug/ml b) 35.7-62.1 ug/ml	a) 56.6 ug/ml b) 48.1 ug/ml	a) Without warfarin treatment b) After 375 mg naproxen 2X/day, 10 days before-7 days after 50 mg warfarin. Means different, P<0.02. Normal males, 8 whites, 2 blacks, ages 24-31 yr. DRUGS; DRUG INTERACTION; BLOOD SERUM; ADULTS; ANTICOAGULANTS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; COMPARATIVE EVALUATIONS	Slattery, J.T. Levy, G. Jain, A. McMahon, F.G. 1979

2-Oxazolidinone, 5-(hydroxymethyl)-3-m-tolyl- (8 CI)
2-Oxazolidinone, 5-(hydroxymethyl)-3-(3-methylphenyl)- (9 CI)
29218-27-7
C11-H13-N-O3
MW 207.25

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3288 Blood, plasma	Ingestion	Radiometry	5	a) 1.9-0.048 ug/ml b) 5.8-0.026 ug/ml	a) Not applicable b) Not applicable	a) Unchanged drug, 0.7 and 6 hr after 200 mg. Initial value, 1.5 ug/ml at 0.3 hr b) Total radioactivity (tolmatone equivalents) 0.7 and 24 hr after 200 mg. Initial value, 3 ug/ml at 0.3 hr Range of means estimated from graph. Normal volunteers, 21-25 yr, fasted 8 hr. DRUGS; ANTIDEPRESSIVE AGENTS; FRANCE; BLOOD PLASMA; URINE; ADULTS; METABOLISM; METABOLITES	Malnoe, A. Benedetti, M.S. 1979
3289 Urine	Ingestion	Radiometry	5	72-80% of dose	Not applicable	Cumulative excretion 6-72 hr after 200 mg. Excretion complete by 24 hr. Normal volunteers, 21-25 yr, fasted 8 hr. DRUGS; ANTIDEPRESSIVE AGENTS; FRANCE; BLOOD PLASMA; URINE; ADULTS; METABOLISM; METABOLITES	Malnoe, A. Benedetti, M.S. 1979

2-Piperidinemethanol, alpha-(3,4-dihydroxyphenyl)-, erythro- (9 CI)
1,2-Benzenediol, 4-(hydroxy-2-piperidinylmethyl)-, (R*,S*)- (9 CI)
32953-89-2
C12-H17-N-03
MW 223.28, MP 203-204 C (crystals from ethyl acetate)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3290 Blood, plasma	Ingestion Inhalation Injection	Radiometry	a) 4 b) 4 c) 2	a) 210.0-395.0 nM b) 8.7-28.1 nM c) 9.9-18.7 nM	a) 230.2 nM b) Not given c) Not given	a) 9.3-10 mg dose b) 0.39-0.56 mg dose c) 0.038-0.22 mg dose Peak levels of radioactive label, expressed as equivalents of drug. Asthmatic hospital patients. DRUGS; BLOOD PLASMA; URINE; AUTONOMIC DRUGS; DRUG THERAPY	Evans, M.E. Shenfield, G.M. Thomas, M. Walker, S.R. Paterson, J.W. 1978
3291 Urine	Ingestion Inhalation Injection	Radiometry	a) 4 b) 4 c) 2	a) 36.9-50.3% b) 49.4-62.3% c) 92.4-92.5%	a) 43.9% b) 57.7% c) 92.45%	a) Dose 9.3-10.0 mg b) Dose 0.39-0.56 mg c) Dose 0.04-0.2 mg Percent of dose excreted as free rimiterol and metabolites. Asthmatic hospital patients. DRUGS; BLOOD PLASMA; URINE; AUTONOMIC DRUGS; DRUG THERAPY	Evans, M.E. Shenfield, G.M. Thomas, M. Walker, S.R. Paterson, J.W. 1978

2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-02
MW 259.34, MF 96 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3292 Blood	Ingestion	Fluorometry	10	a) 90.3-57 ng/ml b) 120.4-78 ng/ml	a) Not given b) Not given	a) 1.5 and 5 hr after 40 mg. Initial value, 88.8 ng/ml at 1 hr b) 1.5 and 5 hr after 40 mg plus 25 mg furosemide. Initial value, 105.7 ng/ml at 1 hr. a) and b) different, $p<0.05$ at 1.5 hr and $p<0.01$ at 5 hr. Some values estimated from graph. Subjects 17-65 yr old, without renal or hepatic insufficiency, in postabsorptive state. Heart rate reduced similarly by both treatments at 1.5-5 hr. DRUGS; DRUG INTERACTION; BLOOD PRESSURE; HYPERTENSION; COMPARATIVE EVALUATIONS; ALCOHOLS	Chiariello, M. Volpe, M. Rengo, F. Trimarco, B. Violini, R. Ricciardelli, B. Condorelli, M. 1979
3293 Blood, plasma	Ingestion	HPLC	6	a) Not given b) Not given c) Not given	a) 123 ng/ml b) 31 ng/ml c) 9 ng/ml	a) Peak at 2 hr b) 4-hydroxypropranolol (metabolite) peak at 1 hr c) Propranolol glycol (metabolite) peak at 2 hr 160 mg dose. 6 healthy volunteers. DRUGS; METABOLITES; BLOOD PLASMA; MEASUREMENT METHODS	Schneck, D.W. Pritchard, J.F. Hayes, A.H., Jr. 1979
3294 Blood, plasma	Ingestion	GC	6	0-32 ng/ml	Not given	1 and 2 hr after last of 8 doses of 40 mg/6 hr. Decline to 0 at 24 hr. Isoproterenol given to increase heart rate and shorten PR interval prior to and during propranolol trials. 6 healthy volunteers 20-24 yr old. DRUGS; DRUG THERAPY; ADULTS; BLOOD PLASMA; OHIC; COMPARATIVE EVALUATIONS; IN VIVO ANALYSIS	Boudoulas, H. Dervenagas, S. Lewis, R.P. Kates, R.E. Dalamangas, G. 1979
3295 Blood, plasma	Ingestion	Fluorometry	38	a) 60.0-10.0 ng/ml b) 3.0-160 ng/ml	a) Not applicable b) Not applicable	a) Range of means at 2 and 12 hr after 80 mg. Initial value, 40 ug/ml at 1 hr b) Range of individual values at 2 hr after 80 mg Propranolol clearance correlated ($r=0.637$) with antipyrine clearance and liver P-450 activity ($r=0.867$). 29 patients with hypertension, 9 with angina pectoris, with normal kidney and renal function, fasted. Ages 20-70 yr. DRUGS; FINLAND; BLOOD PLASMA; ANTIARRHYTHMIC AGENTS; ENZYMES; METABOLISM; HYPERTENSION; HEART DISEASES; ADULTS; ANTIPYRETICS	Sotaniemi, E.A. Anttila, M. Pelkonen, O. Jarvensivu, P. Sundquist, H. 1979

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2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (8 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, ME 96 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3296 Blood, plasma	Injection Ingestion	GC/MS	7	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 6 ng/ml b) 58 ng/ml c) 41 ng/ml d) 256 ng/ml e) 15 ng/ml f) 6.2 ng/ml	a) Propranolol, 20 mg, oral. Mean peak, 3 hr b) Glucuronide conjugate, after 20 mg propranolol, oral. Mean peak, 3 hr c) Propranolol, 80 mg oral. Mean peak 1.5 hr d) Glucuronide conjugate after 80 mg propranolol, oral. Mean peak, 2 hr e) Propranolol after 0.05 mg/kg IV (about 4 mg total). Mean peak, 0.25 hr f) Glucuronide conjugate after 0.05 mg/kg IV about 4 mg total. Mean peak, 2 hr Normal males, 22-32 yr old, fasted before and after dose. DRUGS; SOUTH CAROLINA; METABOLISM; METABOLITES; MEASUREMENT METHODS; BLOOD PLASMA; COMPARATIVE EVALUATIONS	Walle, T. Fagan, T.C. Conradi, E.C. Walle, U.K. Gaffney, T.E. 1979
3297 Blood, plasma	Ingestion	GC/MS	38	a) 8.6-37 ng/ml b) 9.6-49 ng/ml c) 37-109 ng/ml d) 10-80 ng/ml e) 4-40 ng/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 4-Hydroxypropranolol. Peaks at 1 or 1.5 hr after single, daily dose of 20 or 80 mg, normal subjects b) Propranolol. Peaks at 1.5 hr after single, daily dose of 20 or 80 mg, normal subjects c) 4-Hydroxypropranolol glucuronide. Peaks at 2.5 or 3 hr after single, daily dose of 20 or 80 mg, normal subjects d) 4-Hydroxypropranolol. Peaks (2 hr) after 40-800 mg/day in 4 doses, 32 patients e) 4-Hydroxypropranolol. Troughs (6 hr) after 80-960 mg/day in 4 doses, 18 patients Estimated from graph. 6 normal subjects, ages 22-32 yr. 32 patients with mild to moderately severe hypertension or coronary artery disease, all on long-term propranolol therapy. DRUGS; DRUG THERAPY; HYPERTENSION; CARDIOVASCULAR DISEASES; ADULTS; COMPARATIVE EVALUATIONS; ALCOHOLS; BLOOD PLASMA	Walle, T. Conradi, E.C. Walle, U.K. Fagan, T.C. Gaffney, T.E. 1980

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2-Propanol, 1-(isopropylamino)-3-(1-naphthyloxy)- (9 CI)
2-Propanol, 1-((1-methylethyl)amino)-3-(1-naphthalenyloxy)- (9 CI)
525-66-6
C16-H21-N-O2
MW 259.34, MP 96 C

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3298 Blood, plasma	Ingestion	GC	25	a) 16-107 ug/l b) 10-88 ug/l	a) Not applicable b) Not applicable	a) Daily dose divided by 3, taken with meals b) Daily dose taken at breakfast Values correspond to daily dose range of 120-480 mg and were measured before the morning dose. 4-16 individuals per dose level. Other data available. Patients with essential hypertension, on continuous chlorthalidone therapy, 50 mg/day. Ages 18-56 yr. Fall in resting heart rate 2 hr after dose, significantly lower with t.i.d. dose. Mean exercise heart rate higher before and lower after morning dose than with t.i.d. dose. Degree of cardiac beta blockade correlates with plasma level. Side effects mentioned: fatigue, dizziness, insomnia, vivid dreams. DRUGS; NETHERLANDS; DRUG THERAPY; BLOOD PLASMA; ADULTS; COMPARATIVE EVALUATIONS; HYPERTENSION	Van den Brink G. Boer, P. Van Asten, P. Dorhout Mees, E.J. Geyskes, G.G. 1980
3299 Blood, serum		GC	5	a) 56-281 ng/ml b) 5-31 ng/ml c) 0	a) 185 ng/ml b) 18.6 ng/ml c) 0	a) Day of admission, on 160-480 mg b) 1 day after withdrawal c) 2 or more days after withdrawal Serum propranolol directly related to thyroid hormone increase at withdrawal. Males, females 28-57 yr old, with essential hypertension, but no target organ involvement. 4 of 5 patients developed tachycardia, sweating or tremor after withdrawal. Symptoms of thyrotoxicosis after withdrawal. DRUGS; DRUG THERAPY; DENMARK; BLOOD SERUM; ADULTS; HEART DISEASES; HYPERTENSION; HORMONES	Kristensen, B.O. Steiness, E. Weeke, J. 1978
3300 Urine		GC/MS	15	a) Not given b) 3-12% of daily dose	a) 1% of daily dose b) 8% of daily dose	a) 4-Hydroxypropranolol, 15 patients. Excretion was linear function of dose but large intercept value b) 4-Hydroxypropranolol glucuronide, 11 patients Daily excretions. Doses, 80-320 mg/day. Patients with hypertension or coronary artery disease. All on long-term propranolol therapy. DRUGS; DRUG THERAPY; HYPERTENSION; CARDIOVASCULAR DISEASES; ADULTS; COMPARATIVE EVALUATIONS; ALCOHOLS; BLOOD PLASMA	Walle, T. Conradi, E.C. Walle, U.K. Fagan, T.C. Gaffney, T.E. 1980

2-Propanol, 1-(tert-butylamino)-3-((4-morpholino-1,2,5-thiadiazol-3-yl)oxy)-, (S)-(-)- (8 CI)
2-Propanol, 1-((1,1-dimethylethyl)amino)-3-((4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl)oxy)-, (S)- (9 CI)
26839-75-8
C13-H24-N4-O3-S
MW 316.87

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3301 Blood, plasma	Ingestion	GC-EC	8	a) 11.5-8.8 ng/ml b) 7.0-20.8 ng/ml c) 12-52 ng/ml	a) 15.1 + or - 3.6 ng/ml b) 33.5 + or - 3.4 ng/ml c) 53.7 + or - 7.8 ng/ml	a) 5 mg b) 10 mg c) 20 mg Range of means at 1 to 3 hr, and mean peaks after single doses of maleate. Peaks at 2.0 + or - 0.2 hr. b) and c) larger than a) ($p< 0.01$). Healthy volunteers, 20-21 yr old. Percentage reduction in exercise-induced tachycardia a function of log plasma level. DRUGS; DRUG THERAPY; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS	Ishizaki, T. Tawara, K. Oyama, Y. Nakaya, H. 1978
3302 Blood, plasma	Periocular	GC-EC	11	<2-9.6 ng/ml	Not applicable	After a single dose of about 600 ug. 10 of 66 samples had detectable amounts (>2 ng/ml). Dose corrected for losses at the time of application. Healthy males Reduced intraocular pressure, lower pulse rate, systolic pressure, and exercise tachycardia. Local effects: occasional reddening, tearing and stinging. DRUGS; BLOOD PLASMA; URINE; HEALTH HAZARDS; BLOOD PRESSURE; ANTIHYPERTENSIVE AGENTS	Affrime, M.B. Lowenthal, D.T. Tobert, J.A. Shirk, J. Fidelson, B. Cook, T. Onesti, G. 1980
3303 Blood, serum	Ingestion	GC-EC	19	a) 28.2-129.3 ng/ml b) 0-12.6 ng/ml c) 48.8-125.0 ng/ml d) 0-5.6 ng/ml	a) 73.2 ng/ml b) 3.9 ng/ml c) 72.7 ng/ml d) 1.4 ng/ml	a) Peak after 1 hr, normal volunteers b) Minimum at 24 hr, normal volunteers c) Peak after 1.5 hr, moderate chronic renal insufficiency patients d) Minimum after 20 hr, moderate chronic renal insufficiency patients Identical results obtained for blood plasma. 20 mg dose given 2 hr before breakfast. 9 Patients from Pennsylvania aged 21-66 yr, 10 normal volunteers. Hypotension and bradycardia during dialysis. DRUGS; BLOOD SERUM; SALIVA; URINE; DISEASES; METABOLISM; PENNSYLVANIA; BLOOD PLASMA	Lowenthal, D.T. Pitone, J.M. Affrime, M.B. Shirk, J. Busby, P. Kim, K.E. Mancarrow, J. Swartz, C.D. Onesti, G. 1978

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2-Propanol, 1-(tert-butylamino)-3-((4-morpholino-1,2,5-thiadiazol-3-yl)oxy)-, (S)-(-)- (8 CI)
2-Propanol, 1-((1,1-dimethylethyl)amino)-3-((4-(4-morpholinyl)-1,2,5-thiadiazol-3-yl)oxy)-, (S)- (9 CI)
26839-75-8
C13-H28-N4-O3-S
MW 316.47

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3304 Saliva	Ingestion	GC-EC	19	a) Not given b) Not given c) Not given d) Not given	a) 62 ng/ml b) 3.4 ng/ml c) 103.4 ng/ml d) 2.45 ng/ml	a) Peak after 0.5 hr, normal volunteers b) Minimum after 12 hr, normal volunteers c) Peak after 2 hr, patients with moderate chronic renal insufficiency d) Minimum after 13 hr, patients with moderate chronic renal insufficiency Data extrapolated from figures. 20-mg dose given 2 hr before breakfast. 9 Patients from Pennsylvania with varying degrees of renal function, aged 21-66 hr, 10 normal volunteers. Hypotension and bradycardia during dialysis. DRUGS; BLOOD SERUM; SALIVA; URINE; DISEASES; METABOLISM; PENNSYLVANIA; BLOOD PLASMA	Lowenthal, D.T. Pitone, J.M. Affrime, M.B. Shirk, J. Busby, P. Kim, K.E. Mancarrow, J. Swartz, C.D. Onesti, G. 1978
3305 Urine	Ingestion	GC-EC	a) 7 b) 4	a) Not given b) Not given	a) 13.1% b) 5.3%	a) Normal subjects, 48 hr excretion of 20-mg timolol dose b) Patients with moderate chronic renal insufficiency, 48 hr excretion of 20-mg timolol dose. Patients from Pennsylvania with varying degrees of renal function, aged 21-66 yr. Hypotension and bradycardia during dialysis. DRUGS; BLOOD SERUM; SALIVA; URINE; DISEASES; METABOLISM; PENNSYLVANIA; BLOOD PLASMA	Lowenthal, D.T. Pitone, J.M. Affrime, M.B. Shirk, J. Busby, P. Kim, K.E. Mancarrow, J. Swartz, C.D. Onesti, G. 1978
3306 Urine	Ingestion	GC-EC	8	a) Not given b) Not given c) Not given	a) 14 + or - 3% of dose b) 14 + or - 3% of dose c) 24 + or - 12% of dose	a) 5 mg b) 10 mg c) 20 mg 24-hr urine values after single doses of maleate. Healthy volunteers, 20-21 yr old. DRUGS; DRUG THERAPY; BLOOD PLASMA; URINE; COMPARATIVE EVALUATIONS	Ishizaki, T. Tawara, K. Oyama, Y. Nakaya, H. 1978
3307 Urine	Periocular	GC-EC	12	Not given	46 ug	0-12 hr cumulative excretion day 1 after about 600 ug. 0-8 hr excretions not different on days 1 and 5. Healthy males Reduced intraocular pressure, lower pulse rate, systolic pressure, and exercise tachycardia. Local effects: occasional reddening, tearing and stinging. DRUGS; BLOOD PLASMA; URINE; HEALTH HAZARDS; BLOOD PRESSURE; ANTIHYPERTENSIVE AGENTS	Affrime, M.B. Lowenthal, D.T. Tobert, J.A. Shirk, J. Eidelson, B. Cook, T. Onesti, G. 1980

2-Propanol, 1-(4-(2-methoxyethyl)phenoxy)-3-((1-methylethyl)amino)-, (+-)-
37350-58-6
C15-H25-N-O3
MW 267.38

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3308 Blood, plasma	Ingestion	GC	30	a) 0.24-1.03 ug/ml b) 0.06-0.35 ug/ml c) 0-0.18 ug/ml d) 0-0.016 ug/ml	a) 0.55 ug/ml b) 0.19 ug/ml c) 0.05 ug/ml d) 0.006 ug/ml	a) After 4 wk on 300 mg/day, 1-2 hr after dose b) After 4 wk on 150 mg/day, 1-2 hr after dose c) After 8 wk on 300 mg/day, 26 hr after dose d) After 8 wk on 150 mg/day, 26 hr after dose. Patients, ages 33-60 yr, with primary hypertension and normal hepatic and renal function. Lower blood pressure, heart rate, and plasma renin activity. Reduced urinary aldosterone. Some, wheezing and shortness of breath, fatigue, insomnia, menstrual disturbances. DRUGS; DRUG THERAPY; HYPERTENSION; BLOOD PLASMA; BLOOD PRESSURE; SWEDEN; CARDIOVASCULAR DISEASES; HEART DISEASES	Karlberg, B.E. Nilsson, O. Tolagen, K. Nitelius, F. Waern, U. 1979

2-Propanol, 1,1,1-trichloro-2-methyl-
57-15-8
C4-H7-Cl3-O
MW 177.47, MP 97 C (anhydrous), BP 167 C at 760 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3309 Blood, plasma	Ingestion	GC	1	100-50 ug/ml	75 ug/ml	Decline over 13 days. Rate of decline exponential and comparable to controls. Estimated from graph. 40 yr old male with history of alcoholism, but not for past 7 yr. Began taking increasing doses of drug 3 mo before admission. Drowsiness, slow speech, dysarthria, sluggish reflexes Some serum enzymes elevated. Adenocarcinoma infiltrating liver. DRUGS; DRUG ABUSE; SEDATIVES; AUSTRALIA; ADULTS; BIOACCUMULATION; BLOOD PLASMA; COMPARATIVE EVALUATIONS; ENZYMES; METABOLISM; NEUROLOGIC MANIFESTATIONS; PSYCHOTROPIC DRUGS	Borody, T. Chinwah, P.M. Graham, G.G. Wade, D.N. Williams, K.M. 1979

2-Propen-1-amine, 3-(4-bromophenyl)-N,N-dimethyl-3-(3-pyridinyl)-, (E)-
56775-88-3
C16-H17-Br-N2
MW 317.25

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3310 Blood, plasma	Ingestion	HPLC	15	a) Not given b) Not given c) Not given d) Not given e) 73-2420 nmol/l	a) 402 + or - 62 nmol/l b) 630 + or - 160 nmol/l c) 524 + or - 97 nmol/l d) 453 + or - 68 nmol/l e) Not given	a) 1 wk b) 2 wk c) 4 wk d) 6 wk e) Range of individual values, first week excluded a)-d) range of means Dose, 200 mg/day, 6 wk. Adult in-patients with primary depressive illness. 10 of 15 showed reduced depression. Fewer side-effects than with amitriptyline therapy. DRUGS; DRUG THERAPY; BLOOD PLASMA; ANTIDEPRESSIVE AGENTS; ADULTS; COMPARATIVE EVALUATIONS; NEUROLOGIC MANIFESTATIONS; PSYCHOTROPIC DRUGS; UNITED KINGDOM	Coppen, A. Rao, V.A.R. Swade, C. Wood, K. 1979
3311 Blood, plasma	Ingestion Injection	GC	6	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 56 ng/ml b) 3.9 ng/ml c) 60 ng/ml d) 5 ng/ml e) 38 ng/ml f) 19 ng/ml	a) Peak, 2 hr after 100 mg, oral b) 24 hr after 100 mg, oral c) Peak, 10 min after 10 mg IV d) 12 hr after 10 mg IV e) Desmethylziselidine, peak, 2 hr after 100 mg ziselidine, oral f) Desmethylziselidine, 24 hr after 100 mg ziselidine, oral Estimated from graphs Interaction with noradrenalin studied. Healthy volunteers, 21-26 yr old. DRUGS; ANTIDEPRESSIVE AGENTS; METABOLISM; METABOLITES; BLOOD PLASMA; SWEDEN	Borg, K.-O. Johnsson, G. Jordo, L. Landborg, P. Pone, O. Welin-Fogelberg, I. 1979

2,3-Dibromopropanol (No postings in CHEMLINE).
MW 217.90, BP 219 C (slight decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3312 Urine		MS	a) 8 b) 1 c) 1	a) 0.5-5.0 ng/ml b) Not applicable c) 11-29 ng/ml	a) Not given b) Trace c) 19.8 ng/ml	a) Children wearing washed, tris-BP-treated sleepwear b) Child - 6 months after cessation of wearing tris-BP-treated pajamas c) 7-yr-old wearing new tris-BP-treated pajamas URINE; METABOLISM; BROMINE ORGANIC COMPOUNDS; ALCOHOLS	Blum, A. Gold, M.D. Ames, B.N. Kenyon, C. Jones, F.R. Hett, E.A. Dougherty, R.C. Horning, E.C. Dzidic, I. Carroll, D.I. Stillwell, R.N. Thenot, J-P. 1978

2,3-Naphthalenediol, 5-(3,((1,1-dimethylethyl)amino)-2-hydroxypropoxy)-1,2,3,4-tetrahydro-
42200-33-9
C17-H27-N-O4
MW 160.19, MP 163.5-164 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3313 Blood, plasma	Injection	Fluorometry	13	a) 36-170 ng/ml b) 592-2647 ng/ml	a) Not given b) Not given	a) 4 hr after 40 mg b) 4 hr after 480 mg Patients, 20-59 yr, with essential hypertension. DRUGS; BLOOD PLASMA; BLOOD PRESSURE; HYPERTENSION; CARDIOVASCULAR DISEASES; ADULTS; MASSACHUSETTS; COMPARATIVE EVALUATIONS	Volicer, L. Liang, C.S. Gavras, H. Tifft, C.P. Kershaw, G.R. Gavras, I. Griffith, D.L. Vukovich, R. Brunner, H.R. 1979
3314 Blood, serum	Ingestion	Fluorometry	46	a) 20-67 ng/ml b) 36-190 ng/ml c) 46-355 ng/ml	a) 32 ng/ml b) 69 ng/ml c) 143 ng/ml	a) 80 mg/day b) 160 mg/day c) 320 mg/day Measured prior to dose on days 9, 13, 15, 25, 27. Subjects with essential hypertension. Correlation, r=-0.45, between steady-state serum level and % decrease in supine diastolic pressure, P<0.05. DRUGS; DRUG THERAPY; HYPERTENSION; BLOOD SERUM; COMPARATIVE EVALUATIONS; BLOOD PRESSURE	Duchin, K.L. Vukovich, R.A. Dennick, L.G. Groel, J.T. Willard, D.A. 1980

2,4-Piperidinedione, 3,3-diethyl-5-methyl-
125-64-4
C10-H17-N-O2
MW 183.26, MP 74-77 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3315 Blood			23	1.0-771.0 ug/ml	76.7 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979

2,5-Hexanedione
110-13-4
C6-H10-O2
MW 114.14, BP 188 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3316 Blood, serum	Inhalation	GC	3	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) 2.0 ug/ml b) 3.0 ug/ml c) 0.9 ug/ml d) 0.2 ug/ml	a) 0.5 hr following exposure to 50 ppm MnBK b) 3 hr following exposure to 50 ppm MnBK c) 0.5 hr following exposure to 100 ppm MnBK d) 3 hr following exposure to 100 ppm MnBK METABOLISM; METABOLITES; URINE; BLOOD SERUM; NEUROLOGIC MANIFESTATIONS	DiVincenzo, G.D. Hamilton, M.L. Kaplan, C.J. Krasavage, W.J. O'Donoghue, J.L. 1978

2,6-Methano-3-benzazocin-8-ol, 1,2,3,4,5,6-hexahydro-6, 11-dimethyl-3-(3-methyl-2-butenyl)-, (2alpha,6alpha,11R*)-
359-83-1
C19-H27-N-O
MW 285.44, MP 145.4-147.2 C (crystals from methanol and water)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3317 Blood			1	Not applicable	0.2 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978

2,7-(Epoxypentadeca(1,11,13)trieniimino)naphtho(2,1-b)furan-1,11(2H)-dione,
5,6,9,17,19,21-hexahydroxy-23-methoxy-2,4,12,16,18,20,22-heptamethyl-8-(N-(4-methyl-1-piperazinyl)formimidoyl)-, 21-acetate (8 CI)
Rifamycin, 3-(((4-methyl-1-piperazinyl)imino)methyl)- (9 CI)
13292-46-1
C43-H58-N4-O12
MW 822.96, MP platelets from acetone 183-188 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3318 Blood, serum		Immunodiffusion	18	a) Not given b) Not given	a) 8.84 ug/ml b) 6.61 ug/ml	a) Peak, 600 mg after fasting b) Peak, 600 mg after high-fat breakfast Active pulmonary tuberculosis patients. When repeated in 2 patients, lowering of peak by breakfast not sustained. 18 patients, 11 male and 7 female, aged 18 to 66 yr. DRUGS; TUBERCULOSIS; BLOOD SERUM; URINE; ANTIBIOTICS	Siegler, D.I. Burley, D.M. Bryant, M. Citron, K.M. Standen, S.M. 1974
3319 Urine		Immunodiffusion	18	a) Not given b) Not given	a) 18.4% b) 13.2%	a) Peak, 600 mg after fasting b) Peak, 600 mg 30 min after high-fat breakfast Active pulmonary tuberculosis patients. Values are 24-hr total. 18 patients, 11 male and 7 female, aged 18 to 66 yr. DRUGS; TUBERCULOSIS; BLOOD SERUM; URINE; ANTIBIOTICS	Siegler, D.I. Burley, D.M. Bryant, M. Citron, K.M. Standen, S.M. 1974

2',6'-Acetoxylidide, 2-(diethylamino)- (8 CI)
Acetamide, 2-(diethylamino)-N-(2,6-diethylphenyl)- (9 CI)
137-58-6
C14-H22-N2-O
MW 234.33, MP 68-69 C, BP 180-181 C at 4 mm Hg, 159-160 C at 2 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3320 Blood			1	Not applicable	0.61 mg/dl	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; BILE; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3321 Blood, fetal	Injection	GC GC/MS	6	a) 1028-2030 ng/ml b) 165-497 ng/ml c) 0-33 ng/ml d) 320-2160 ng/ml e) 47-458 ng/ml f) 0-23 ng/ml	a) 1620 ng/ml b) 267 ng/ml c) 13.1 ng/ml d) 1298 ng/ml e) 294 ng/ml f) 7.4 ng/ml	a) Lidocaine, cord vein b) Monoethylglycinexylidide, cord vein c) Glycinexylidide, cord vein d) Lidocaine, cord artery e) Monoethylglycinexylidide, cord artery f) Glycinexylidide, cord artery After lidocaine by epidural catheter. Similar data for vaginal births. Cesarean births. DRUGS; DRUG THERAPY; ANESTHETICS; METABOLISM; METABOLITES; BLOOD PLASMA; NEWBORN; URINE; UMBILICAL CORD	Kuhnert, B.R. Knapp, D.R. Kuhnert, P.M. Prochaska, A.L. 1979
3322 Blood, plasma	Injection	GC	4	a) 0.82-1.15 ug/ml b) 0.01-0.04 ug/ml	a) 0.96 ug/ml b) 0.02 ug/ml	a) Peak 0.25 hr after 1 mg/kg IV b) 4 hr after 1 mg/kg IV Healthy Canadian volunteers with average weight of 59.14 kg. DRUGS; BLOOD PLASMA; MEASUREMENT METHODS; CANADA	Caille, G. Lelorier, J. Latour, Y. Besner, J.G. 1977
3323 Blood, plasma	Injection	GC GC/MS	15	a) 1,410-4780 ng/ml b) 586-3,723 ng/ml c) 65-860 ng/ml d) 7-370 ng/ml e) 0-36 ng/ml f) 0-50.5 ng/ml	a) 2,094 ng/ml b) 1,638 ng/ml c) 322 ng/ml d) 152 ng/ml e) 13.4 ng/ml f) 13.7 ng/ml	a) Lidocaine, cesareans b) Lidocaine, vaginal deliveries c) Monoerhylglycinexylidide, cesareans d) Monoethylglycinexylidide, vaginal deliveries e) Glycinexylidide, cesareans f) Glycinexylidide, vaginal deliveries Values after lidocaine by epidural catheter. Normal pregnant patients. DRUGS; DRUG THERAPY; ANESTHETICS; METABOLISM; METABOLITES; BLOOD PLASMA; NEWBORN; URINE; UMBILICAL CORD	Kuhnert, B.R. Knapp, D.R. Kuhnert, P.M. Prochaska, A.L. 1979
3324 Blood, whole	Injection	GC	a) 6 b) 17	a) 1-1.6 mg/l b) 0-0.70 mg/l	a) 1.3 mg/l b) Not given	a) Therapeutic peak levels, 30-60 min after dose b) Range of means, 0 and 90 min after dose Average initial dose, 191 mg. Subsequent doses, average of 74 mg. Patients undergoing cardiac electrophysiologic studies. DRUGS; DRUG THERAPY; INDIANA; BLOOD; CARDIOVASCULAR DISEASES; HEART DISEASES	Nattel, S. Rinkenberger, R.L. Lehrman, L.L. Zipes, D.P. 1979

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2',6'-Acetoxylidide, 2-(diethylamino)- (8 CI)
Acetamide, 2-(diethylamino)-N-(2,6-diethylphenyl)- (9 CI)
137-58-6
C14-H22-N2-O
MW 234.33, MP 68-69 C, BP 180-181 C at 4 mm Hg, 159-160 C at 2 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3325 Liver		GC	1	Not applicable	0.37 mg/100 g	Cocaine-related death Postmortem samples from overdose fatality involving cocaine. DRUGS; METABOLITES; AUTOPSIES; BLOOD; URINE; MILK; BRAIN; LIVER; LUNGS	Valentour, J.C. Aggarwal, V. McGee, M.P. Goza, S.W. 1978
3326 Urine	Injection	GC	33	a) 5.9-0.2 ug/mg creatinine b) 9-0.3 ug/ml creatinine c) 4.2-0.7 ug/mg creatinine d) 7-0.2 ug/mg creatinine e) 17.5-1.8 ug/mg creatinine f) 7.2-1.7 ug/mg creatinine	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable	a) Lidocaine, mothers b) Monoethylglycinexylidide, mothers c) Glycinexylidide, mothers d) Lidocaine, neonates e) Monoethylglycinexylidine, neonates f) Glycinexylidide, neonates Day 1 - Day 3 urine, 14 mothers, 19 neonates. Lidocaine by epidural catheter during labor. DRUGS; DRUG THERAPY; ANESTHETICS; METABOLISM; METABOLITES; BLOOD PLASMA; NEWBORN; URINE; UMBILICAL CORD	Kuhnert, B.R. Knapp, D.R. Kuhnert, P.M. Prochazka, A.I. 1979

2H-1,2-Benzothiazine-3-carboxamide, 4-hydroxy-2-methyl-N-2-pyridinyl-, 1,1-dioxide
36322-90-4
C15-H13-N3-O4-S
MW 331.37

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3327 Blood, plasma	Ingestion	Fluorometry Colorimetry	a) 2 b) 4 c) 5 d) 5 e) 5	a) <0.5-2.3 ug/ml b) 15.6-0.5 ug/ml c) 1.4-3.2 ug/ml d) 3.9-0.5 ug/ml e) 8.1-11.7 ug/ml	a) Not given b) Not given c) Not applicable d) Not applicable e) Not applicable	a) Controls, 1 and 4 hr after 15-mg, single, oral dose. 0.5 ug/ml at 96 hr, final value b) Controls, 2 and 120 hr after 100-mg, single, oral dose c) Arthritic patients, range of means, 0 and 4 hr after 10 mg, oral, on day 14 d) Arthritic patients, range of means, 0 and 4 hr after 20 mg, oral, on day 14 e) Arthritic patients, range of means, 0 and 4 hr after 30 mg, oral, on day 14 Healthy males and patients with rheumatoid arthritis. DRUGS; DRUG THERAPY; BLOOD PLASMA; CONNECTICUT; ANTI-INFLAMMATORY AGENTS; ANALGESICS; COMPARATIVE EVALUATIONS; ADULTS; RHEUMATOID ARTHRITIS	Hobbs, D.C. Twomey, T.M. 1979

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 3,4-dihydro-6-(trifluoromethyl)-, 1,1-dioxide
135-09-1
C8-H8-F3-N3-O4-S2
MW 331.29, MP 272-273 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3328 Blood, plasma	Ingestion	Fluorometry	12	0.05-0.08 ug/ml	0.32 ug/ml	Range of 0.5- and 12-hr means, mean peak value at 2.3 hr after single 100-mg dose. Zero-order absorption rate. Healthy Adults DRUGS; ADULTS; BLOOD PLASMA	McNamara, P.J. Colburn, W.A. Gibaldi, M. 1978

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-, 1,1-dioxide
58-94-6
C7-H6-Cl-N3-O4-S2
MW 295.70, MF 342.5-34) C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3329 Urine	Ingestion	Colorimetry	12	10.9-19.7% of dose	Not given	Range of means for 5, 250- or 500-mg tablet-form chlorothiazide products in 24-hr urines. Cumulative excretion began to plateau at 7.5 hr for all 5 products. Maximum excretion at 2.7-3.3 hr. Healthy subjects, ages 23-28 yr, fasted before and after dose. DRUGS; METABOLISM; URINE; ADULTS; COMPARATIVE EVALUATIONS	Straughn, A.B. Melikian, A.P. Meyer, M.C. 1979

2H-1,2,4-Benzothiadiazine-7-sulfonamide, 6-chloro-3,4-dihydro-,1,1-dioxide
58-93-5
C7-H8-Cl-N3-O4-S2
MW 297.72, MP 273-275 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3330 Blood	Ingestion	GC-EC	2	a) Not applicable b) Not applicable	a) 547 ng/ml b) 851 ng/ml	a) Subject 1, 3 hr post-ingestion b) Subject 2, 3 hr post ingestion Healthy volunteers DRUGS; BLOOD; BLOOD PLASMA; DIURETICS; MEASUREMENT METHODS; NEW YORK; NEW JERSEY	Pedalieu, E. Tipnis, V.V. Wagner, W.E., Jr. 1978
3331 Blood, plasma	Ingestion	GC-EC	2	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 294 ng/ml b) 450 ng/ml c) 428 ng/ml d) 10 ng/ml e) 24 ng/ml	a) Subject 1, 2 hr post-ingestion b) Subject 2, 2 hr post-ingestion c) Subject 1, 2.5 hr post-ingestion d) Subject 1, 24 hr post-ingestion e) Subject 2, 24 hr post-ingestion 50-mg dose. Healthy volunteers DRUGS; BLOOD; BLOOD PLASMA; DIURETICS; MEASUREMENT METHODS; NEW YORK; NEW JERSEY	Pedalieu, E. Tipnis, V.V. Wagner, W.E., Jr. 1978

28-1,4-Benzodiazepin-2-one, 1,3-dihydro-7-nitro-5-phenyl-
146-22-5
C15-H11-N3-O3
MW 281.26, MP 224-226 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3332 Blood, plasma	Ingestion	GC-EC	1) 11 b) 20 c) 6	a) Not given b) 4-75 ng/ml c) 68-214 ng/ml	a) 57 + or - 17 ng/ml b) 48 + or - 20 ng/ml c) 71 + or - 9 ng/ml	a) Volunteers on 5 mg/day b) Patients on 5 mg/day, 10 males, 10 females c) Patients on more than 5 mg/day, 6 females steady state values. Rate of metabolism stable during long-term therapy. 11 volunteers in good health, ages 21-33 yr. 26 psychiatric out-patient insomniacs, ages 21-59 yr, all of Turku, most on multi-drug therapy. Volunteers: dizziness, muscle relaxation, dry mouth, headache, bad dreams, allergic erythema. Patients: tiredness, dizziness, muscle weakness, vertigo, ataxia. Side-effects varied, none serious except erythema. COMPARATIVE EVALUATIONS; DRUGS; DRUG THERAPY; DRUG ABUSE; ADULTS; FINLAND; BLOOD PLASMA; PSYCHOTROPIC DRUGS; NEUROLOGIC MANIFESTATIONS; METABOLISM	Kangas, L. Kanto, J. Lehtinen, V. Salminen, J. 1979

2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(o-fluorophenyl)-1,3-dihydro- (8 CI)
2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(2-fluorophenyl)-1,3-dihydro- (9 CI)
17617-23-1
C21-H23-Cl-F-N3-O
MW 387.89, MP Dihydrochloride 190-220 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3333 Blood			18	0.1-210 ug/ml	17.8 ug/ml	Death caused by drug combinations. Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3336 Blood, plasma	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.5 ug/ml b) < 0.2 ug/ml c) <0.2 ug/ml d) 1.7 ug/ml	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 50 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
3335 Blood, plasma	Ingestion	GC-EC	10	a) 25-93 ng/ml b) 34-167 ng/ml c) 34-170 ng/ml d) 0-118 ng/ml	a) 64 ng/ml b) 103 ng/ml c) 122 ng/ml d) 16 ng/ml	a) 1st morning b) 7th morning c) 14th morning d) 7th morning of washout period N-Demethylflurazepam metabolite after 30-mg dose 30 min before bedtime for 14 days. Patients with severe insomnia but free of somatic and psychiatric illness, ages 21-36 yr. Sleep latency did not differ from placebo. DRUGS; DRUG THERAPY; HYPNOTICS; SEDATIVES; COMPARATIVE EVALUATIONS; ADULTS; BLOOD PLASMA; NEUROLOGIC MANIFESTATIONS; HEALTH HAZARDS; DIAZEPAMS	Lionnois, M. Erwin, C.W. Logue, P.E. 1980

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(o-fluorophenyl)-1,3-dihydro- (8 CI)
2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(2-fluorophenyl)-1,3-dihydro- (9 CI)
17617-23-1
C21-H23-Cl-F-N3-O
MW 387.89, MF Dihydrochloride 190-220 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3336 Brain	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1.1 ug/g b) 0.3 ug/g c) 0.8 ug/g d) <0.2 ug/g e) 1.9 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 58 yr old man, posttraumatic epilepsy, previous suicide attempt e) 58 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
3337 Kidney	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.6 ug/g b) 0.2 ug/g c) 0.9 ug/g d) <0.2 ug/g e) 2.0 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 58 yr old man, posttraumatic epilepsy, previous suicide attempt e) 58 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(o-fluorophenyl)-1,3-dihydro- (9 CI)
2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(2-fluorophenyl)-1,3-dihydro- (9 CI)
17617-23-1
C21-H23-Cl-F-N3-O
MW 387.89, MS Dihydrochloride 190-220 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3338 Liver	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 1.7 ug/g b) 0.9 ug/g c) 2.7 ug/g d) <0.2 ug/g e) 7.3 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 54 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979
3339 Lung	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1 e) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable	a) 0.8 ug/g b) 0.6 ug/g c) 1.9 ug/g d) <0.2 ug/g e) 1.8 ug/g	a) 71 yr old man, suicide b) 27 yr old woman c) 5 yr old girl, epileptic, subtherapeutic levels of diphenylhydantoin also found d) 54 yr old man, posttraumatic epilepsy, previous suicide attempt e) 54 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Marigo, M. Castagna, F. 1979

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(o-fluorophenyl)-1,3-dihydro- (8 CI)
2H-1,4-Benzodiazepin-2-one, 7-chloro-1-(2-(diethylamino)ethyl)-5-(2-fluorophenyl)-1,3-dihydro- (9 CI)
17617-23-1
C21-H23-Cl-F-N3-O
MW 387.89, MP Dihydrochloride 190-220 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3340 Urine	Ingestion	GC Immunoenzymatic	a) 1 b) 1 c) 1 d) 1	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) <0.2 ug/ml b) <0.2 ug/ml c) <0.2 ug/ml d) 0.3 ug/ml	a) 71 yr old man, suicide b) 27 yr old woman c) 56 yr old man, posttraumatic epilepsy, previous suicide attempt d) 56 yr old man, depressive syndrome, blood alcohol level 2.98 g/l All died of acute intoxication from combination of phenobarbital and flurazepam Data also available for some metabolites. Deep coma, cardiocirculatory collapse, shock, complete areflexia. Each case had 1 or more of the following: polyvisceral congestion, cerebral injury, encephalic and pulmonary edema, bronchial pneumonia, hepatic cirrhosis. ADULTS; CHILDREN; AUTOPSIES; ANTICONVULSANTS; HYPNOTICS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; BRAIN; LUNGS; KIDNEYS; LIVER; URINE; DRUGS; DRUG THERAPY; METABOLITES; SUICIDE; DRUG ABUSE; ITALY	Ferrara, S.D. Tedeschi, L. Frigo, M. Castagna, F. 1979

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
439-14-5
C16-H13-Cl-N2-O
MW 284.76, MF 125-126 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3341 Blood	Ingestion Injection	GC UV TLC GC/MS	731	0.004-64.0 ug/ml	2.33 ug/ml	Diazepam-related deaths, 1973 - 1976. In 2 cases, diazepam was the sole cause of death. Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissue and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding. DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3342 Blood, plasma	Injection	GC		a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 28 ng/ml b) 47 ng/ml c) 85 ng/ml d) 90 ng/ml e) 124 ng/ml f) 100 ng/ml	a) 15 min b) 60 min c) 90 min d) 15 min e) 60 min f) Time = 90 min 10-mg dose administered by nurses (a-c) and doctors (d-f). Healthy female subjects weighing 45-70 kg. DRUGS; DIAZEPAMS; BLOOD PLASMA; IRELAND	Dundee, J.W. Gamble, J.A.S. Assaf, R.A.F. 1974
3343 Blood, plasma	Injection	GC	a) 1 b) 1	a) 9.5-900.0 nmol/l b) 9.0-750.0 ng/ml	a) 248.57 nmol/l b) 170.32 ng/ml	a) Male with dose of 6.62 mg b) Female with dose of 7.5 mg Values measured during 1 wk. Estimated from figure. 74 yr old male with lip infection and 81 yr old female with peripheral vascular insufficiency. DRUGS; BLOOD PLASMA; ADULTS; AGE; SEX	MacLeod, S.M. Giles, H.G. Bengert, B. Liu, F.F. Sellers, E.M. 1979
3344 Blood, serum	Rectal Injection	GC	6	a) 468-960 ng/ml b) 121-300 ng/ml c) 62-196 ng/ml	a) 711 ng/ml b) 201 ng/ml c) 124 ng/ml	a) IV, peak at 5 min b) Rectal, peak at 10-20 min c) IM, peak at 60-1440 min Peaks after 10 mg dose. Elimination phase after IM not well characterized. Levels of N-desmethyldiazepam < 25 ng/ml during first 8 hr for all routes. Patients with many years' attacks of severe headaches, with normal cardiac, hepatic, and renal function. Ages 24-60 yr. DRUGS; DRUG THERAPY; DENMARK; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS; METABOLITES	Magnussen, I. Oxlund, H.R.W. Alsbirk, K.E. Arnold, E. 1979

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-1-methyl-5-phenyl-
439-14-5
C16-H13-Cl-N2-O
HW 284.76, MF 125-126 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3345 Blood, serum	Ingestion	GC	18	a) Not given b) Not given c) Not given d) Not given	a) 211.00 + or - 82.24 ng/ml b) 221.25 + or - 111.65 ng/ml c) 856.10 + or - 251.88 ng/ml d) 740.28 + or - 352.82 ng/ml	a) Day 7 of 2 mg 3x/day b) Day 14 of 2 mg 3x/day c) Day 7 of 10 mg 3x/day d) Day 14 of 10 mg 3x/day Effects on psychomotor skills, interaction with alcohol tested in acute and subacute studies. Healthy students, 5 females, 13 males, 20-26 yr old. 10 mg slightly increased reaction times. DRUGS; DIAZEPAMS; COMPARATIVE EVALUATIONS; BLOOD SERUM; METABOLISM; NEUROLOGIC MANIFESTATIONS; FINLAND	Palva, E.S. Linnoila, M. Saario, I. Mattila, M.J. 1979
3346 Kidney	Ingestion Injection	GC UV TLC GC/MS	11	0.200-13.0 ug/g	3.57 ug/g	Increase in diazepam-related deaths, 1973 - 1976. In 2 cases, diazepam was the sole cause of death. Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3347 Liver	Ingestion Injection	GC UV TLC GC/MS	242	0.180-60.0 ug/g	4.23 ug/g	Diazepam-related deaths, 1973 - 1976. In 2 cases, diazepam was the sole cause of death. Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Pulmonary and visceral congestion most common postmortem finding. DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3348 Saliva	Ingestion	GC	25	a) 2.0-30.0 ng/ml b) 1.5-70.0 ng/ml	a) 10.5 ng/ml b) 19.14 ng/ml	a) Diazepam b) N-desmethyldiazepam (metabolite) Diazepam dosage of 6-45 mg/day. Estimated from graph. Inpatients at Toronto Western Hospital or Lyndhurst Hospital, Toronto, 19-79 yr old. DRUGS; DIAZEPAMS; METABOLITES; SALIVA; CANADA	Giles, H.G. Miller, E. MacLeod, S.M. Sellers, E.M. 1980

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-3-hydroxy-5-phenyl-
604-75-1
C15-H11-Cl-N2-O2
MW 286.74, MF 205-206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3349 Blood, plasma	Ingestion		1	Not applicable	1.2 mg/l	Initial toxicologic analysis. 18-yr-old male, in stage 4 coma, had ingested 22.5 g ethchlorvynol, 1.5 g oxazepam, 360 mg flurazepam, 580 mg phenobarbital, and 600 mg diphenhydramine. DRUGS; DRUG ABUSE; HYPNOTICS; SEDATIVES; SUICIDE; LAVAGE; BLOOD PLASMA; CASE HISTORIES; ANTICONVULSANTS; TRANQUILIZERS	Benowitz, N. Abolin, C. Tozer, T. Rosenberg, J. Rogers, W. Pond, S. Schoenfeld, P. Humphreys, M. 1980
3350 Urine	Ingestion	HPLC	11	38.6-69.0%	56.75%	% of dose in 48-hr urine. Plasma half-life and clearance highly correlated with that of antipyrine. Student non-smokers. Ages 21-33. DIAZEPAMS; ANALGESICS; WISCONSIN; DRUGS; METABOLISM	Kellermann, G.H. Luyten-Kellermann, M. 1979

2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-5-phenyl-
1088-11-5
C15-H11-Cl-N2-O
MW 270.73

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3351 Blood		Immunoenzymatic		Not given	390 ug/100 ml	Toxicology case. Mixture of benzodiazepins. DRUGS; BILE; BRAIN; LIVER; KIDNEYS; DIAZEPAM; BLOOD; MEASUREMENT METHODS	Slighton, E.L. 1978
3352 Blood	Ingestion Injection	GC UV TLC GC/MS	77	0.10-13.40 ug/ml	0.99 ug/ml	Diazepam metabolite Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3353 Blood, plasma	Ingestion	GC-EC	a) 10 b) 10	a) Not given b) Not given	a) 273 ng/ml b) 188 ng/ml	a) Peak level, 1.8 hr after 15 mg plus water b) Peak level, 2.8 hr after 15 mg plus magnesium aluminum hydroxide Data available for kinetic variables and other time points up to 48 hr. Healthy volunteers, 23-70 yr old. Self-rated sensations of "spacey", "thinking slowed down", and of generalized sedation occurred in both groups but earlier and more profound when taken with water. DRUGS; PSYCHOTROPIC DRUGS; DRUG THERAPY; DIAZEPAM; BLOOD PLASMA; COMPARATIVE EVALUATIONS; MASSACHUSETTS	Shader, R.I. Georgotas, A. Greenblatt, D.J. Harwatz, J.S. Allen, M.D. 1978
3354 Blood, serum	Ingestion		a) 6 b) 8 c) 10	a) 268-433 ng/ml b) 156-217 ng/ml c) 170-286 ng/ml	a) 371 ng/ml b) 185 ng/ml c) 216 ng/ml	a) Peaks, young controls. Peak times 0.5-2 hr b) Peaks, elderly controls. Peak times 1-3 hr c) Peaks, gastrectomy patients. Peak times 0.75-6 hr 20-mg clorazepate dipotassium after fast. Healthy controls (ages 20-26 yr), elderly controls (ages 50-75 yr), Billroth gastrectomy patients, (ages 36-68 yr) all healthy >2 yr after surgery. DRUGS; GASTROINTESTINAL SYSTEM; BLOOD SERUM; SURGERY; DISEASES; ADULTS; AGE; METABOLISM	Ochs, H.R. Greenblatt, D.J. Allen, M.D. Harwatz, J.S. Shader, R.I. Bodem, G. 1979

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2H-1,4-Benzodiazepin-2-one, 7-chloro-1,3-dihydro-5-phenyl-
1088-11-5
C15-H11-Cl-N2-O
MW 270.73

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3355 Liver	Ingestion Injection	GC UV TLC GC/MS	7	0.57-28.9 ug/g	5.48 ug/g	Diazepam metabolite Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissue and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979

2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(o-chlorphenyl)-1,3-dihydro-3-hydroxy- (8 CI)
2H-1,4-Benzodiazepin-2-one, 7-chloro-5-(2-chlorophenyl)-1,3-dihydro-3-hydroxy- (9 CI)
846-49-1
C15-H10-C12-N2-O2
HH 321.16, NF 166-168 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3356 Blood, serum	Injection	GC-EC	18	a) 2.0-113.05 ng/ml b) 1.75-16.00 ng/ml	a) 34.67 + or - 30.95 ng/ml b) 6/67 + or - 4.26 ng/ml	a) Unconjugated (n=18), 1.0-6.5 ng/ml not protein-bound in the 13 cases measured b) Conjugated (n=18), <1-8.4 ng/ml not protein-bound in the 13 cases measured One value per case. Times after 0.03 mg/kg IV varied from 5.25 min->25 hr. Data also on 2 cases of oral dose. Patients 41.7 + or - 16 yr old, surgery on lower abdomen and extremities, spinal anesthesia with lidocaine or mepivacaine, lorazepam as a premedication. CEREBROSPINAL FLUID; MUSCLE RELAXANTS; ANESTHETICS; BLOOD SERUM; SURGERY; FINLAND	Aaltonen, L. Kanto, J. Salo, M. 1980
3357 Cerebrospinal fluid	Injection	GC-EC	18	a) 0-2.0 ng/ml b) 0-1.5 ng/ml	a) Not given b) Not given	a) Unconjugated b) Conjugated One value per case. Time after 0.03 mg/kg IV varied from 5.25 ->25 min. Data also on 2 cases of oral dose. Patients 41.7 + or - 16 yr old, surgery on lower abdomen and extremities, spinal anesthesia with lidocaine or mepivacaine, lorazepam as a premedication. CEREBROSPINAL FLUID; MUSCLE RELAXANTS; ANESTHETICS; BLOOD SERUM; SURGERY; FINLAND	Aaltonen, L. Kanto, J. Salo, M. 1980

3-Heptanone, 6-(dimethylamino)-4,4-diphenyl-
76-99-3
C21-H27-N-O
MW 309, MP Hydrochloride 235 C (dl form)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3358 Blood			46	0.02-4.1 ug/ml	0.62 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3359 Blood, plasma	Ingestion	GC	21	a) 0-135 ng/ml b) 135-200 ng/ml	a) Not applicable b) Not applicable	a) Range of means 0 and 8 days. Dose 30 mg/day. 8-12 patients per mean. Final value, 100 ng/ml, day 22 b) Range of means 0 and 8 days. Dose 60 mg/day. 10-16 patients per mean. Final value, 170 ng/ml, day 28 Dose, 30 mg/day for 10-24 days, then 60 mg/day for 10-24 days. Considerable individual variation. Patients, compulsive opiate abuse >5 yr. 22-41 yr of age. All were heavy smokers. Detoxified before study. 20 men, 1 woman. Rehabilitation ranking correlated with plasma levels. DRUGS; DRUG THERAPY; BLOOD PLASMA; SWEDEN; PSYCHOTROPIC DRUGS; DRUG ABUSE; ADULTS	Holmstrand, J. Anggard, E. Gunne, L.M. 1978

3,5-Pyrazolidinedione, 1,2-diphenyl-4-(2-(phenylsulfinyl)ethyl)-
57-96-5
C23-H20-N2-O3-S
MW 404.48, MP 136-137 C (dl form)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3360 Blood, plasma	Ingestion	GC	a) 2 b) 6	a) 6.7-11.4 ug/ml b) 10.7-30.1 ug/ml	a) 8.7 ug/ml b) Not given	a) Peak after initial 200-mg dose b) Maximum steady state levels at 10 days following 200 mg t.i.d. Patients undergoing hemodialysis for chronic renal failure. Prevention of platelet consumption and protection against decrement of antithrombin III during hemodialysis. DRUGS; BLOOD PLASMA; DRUG THERAPY	Bern, M.M. Cavaliere, R.R. Lukas, G. 1980
3361 Blood, plasma	Injection Ingestion	HPLC	a) 2 b) 6 c) 6	a) 112.1-0.8 ng/ml b) Not given c) Not given	a) Not applicable b) 18.9 ug/ml c) 35.8 ug/ml	a) 0-24 hr means after IV bolus of 6.7 mg/kg. Triexponential decline b) Mean peak after 200 mg, oral. Peak at 1.6 hr c) Mean peak after 600 mg, oral. Peak at 1.6 hr Other data available. Healthy males, ages 22-48 yr. DRUGS; BLOOD PLASMA; FRANCE; ADULTS; COMPARATIVE EVALUATIONS	Lecaillon, J.B. Souppart, C. Schoeller, J-P. Humbert, G. Hanssen, P. 1979

3H-1,4-Benzodiazepine, 7-chloro-2-(methylamino)-5-phenyl-, 4-oxide (8 CI)
3H-1,4-Benzodiazepin-2-amine, 7-chloro-N-methyl-5-phenyl-, 4-oxide (9 CI)
58-25-3
C16-H14-Cl-N3-O
MW 299.75, MP 236-236.5 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3362 Blood			18	0.9-6.9 ug/ml	2.7 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3363 Blood, plasma	Ingestion Injection	Fluorometry	10	a) 1.28-2.50 ug/ml b) 1.00-2.50 ug/ml c) 0.98-2.09 ug/ml d) 0.27-1.35 ug/ml e) 0.38-0.74 ug/ml f) 0.14-1.35 ug/ml g) 0.34-0.64 ug/ml h) 0.45-0.63 ug/ml	a) 1.88 ug/ml b) 1.87 ug/ml c) 1.38 ug/ml d) 0.71 ug/ml e) 0.65 ug/ml f) 0.91 ug/ml g) 0.53 ug/ml h) 0.52 ug/ml	a) 1 oral dose b) 2 oral doses, second dose 1 wk later c) 1 IV dose d) 2 IM doses, second dose 1 wk later e) 1 oral dose, as metabolite, N-desmethylchlordiazepoxide f) 2 oral doses, second dose 1 wk later, as metabolite, N-desmethylchlordiazepoxide g) 1 IV dose, as metabolite, N-desmethylchlordiazepoxide h) 2 IV doses, second dose 1 wk later, as metabolite, N-desmethylchlordiazepoxide 2 groups, 5 cases oral doses and 5 cases IV doses. Psychiatric patients aged 23-65 yr diagnosed as alcoholics or as having had alcohol withdrawal. DRUGS; BLOOD PLASMA; ALCOHOLIC BEVERAGES; SEDATIVES; METABOLITES; COMPARATIVE EVALUATIONS; IOWA	Perry, P.J. Wilding, D.C. Fowler, R.C. Meplec, C.D. Caputo, J.F. 1978
3364 Blood, plasma	Injection	Fluorometry	25	a) 2.9-0.51 ug/ml b) 2.7-0.13 ug/ml c) 0.38-0.23 ug/ml d) 0.68-0.20 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable	a) Chlordiazepoxide, 11 cirrhotics. Range of means, 0-48 hr, continuous decline b) Chlordiazepoxide, 14 normals. Range of means, 0-48 hr, continuous decline c) Desmethylchlordiazepoxide, 11 cirrhotics. Range of means, 17 and 48 hr, 0.1 ug/ml at <1 hr d) Desmethylchlordiazepoxide, 14 normals. Range of means, 9 and 48 hr, 0.21 ug/ml at <1 hr Values after 50 mg of the hydrochloride IV over 10 min. Estimated from graphs. Healthy males, mean age 25.4 yr, and male alcoholics with cirrhosis, mean age 47.8 yr. All abstaining from alcohol and drugs >2 wk. DRUGS; CIRRHOSIS; METABOLISM; BLOOD PLASMA; LIVER DISEASES; ADULTS; COMPARATIVE EVALUATIONS; TRANQUILIZERS	Sellers, E.M. Greenblatt, D.J. Giles, H.G. Naranjo, C.A. Kaplan, H. MacLeod, S.M. 1979

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3H-1,4-Benzodiazepine, 7-chloro-2-(methylamino)-5-phenyl-, 4-oxide (8 CI)
3H-1,4-Benzodiazepin-2-amine, 7-chloro-N-methyl-5-phenyl-, 4-oxide (9 CI)
58-25-3
C16-H14-Cl-N3-O
MW 299.75, MP 236-236.5 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3365 Blood, plasma	Injection Ingestion	RIA	a) 1 b) 1 c) 1	a) 1.85-0.7 ug/ml b) 3.5-0.07 ug/ml c) 1.8-0.096 ug/ml	a) Not given b) Not given c) Not given	a) 10-mg oral dose 3x/day, 8 days, 30 min-30 hr after last dose b) 35 mg IV, 30 min-70 hr after single dose c) 50 mg IV, 30-70 hr after single dose Estimated from graphs. DRUGS; BLOOD PLASMA; SALIVA; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Lucek, R. Dixon, R. 1980
3366 Saliva	Injection Ingestion	RIA	a) 1 b) 1 c) 1	a) 0.056-0.02 ug/ml b) 0.07-0.0017 ug/ml c) 0.042-0.002 ug/ml	a) Not given b) Not given c) Not given	a) 10-mg oral dose 3x/day 4 days, 30 min-30 hr after last dose b) 35 mg IV, 30 min-70 hr after single dose c) 50 mg IV, 30 min-70 hr after single dose Estimated from graph. DRUGS; BLOOD PLASMA; SALIVA; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Lucek, R. Dixon, R. 1980

4(3H)-Quinazolinone, 2-methyl-3-o-tolyl- (8 CI)
4(3H)-Quinazolinone, 2-methyl-3-(2-methylphenyl)- (9 CI)
72-48-6
C16-H14-N2-O
MW 250.29, MP 120 C, also given as 110-116 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	SPECIAL INFORMATION	REFERENCE
3367 Blood			29	0.1-23.0 ug/ml	5.5 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; STAR; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3369 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1 e) 1 f) 1 g) 1	a) 2.31-0.39 ug/ml b) 2.64-0.30 ug/ml c) 2.59-0.29 ug/ml d) 2.57-0.36 ug/ml e) 1.99-0.33 ug/ml f) 2.19-0.31 ug/ml g) 1.92-0.36 ug/ml	a) Not applicable b) Not applicable c) Not applicable d) Not applicable e) Not applicable f) Not applicable g) Not applicable	a) Peak level to level at 30 hr b) Peak level to level at 30 hr c) Peak level to level at 30 hr d) Peak level to level at 30 hr e) Peak level to level at 30 hr f) Peak level to level at 30 hr g) Peak level to level at 30 hr Individuals received single therapeutic doses of 300 mg. Healthy male volunteers BLOOD; BLOOD PLASMA; DRUGS; DRUG THERAPY	Clifford, J.H. Cookson, J.M. Wickham, P.E. 1978

4-Piperidinol, 1,3-dimethyl-4-phenyl-, propionate (ester) (8 CI)
4-Piperidinol, 1,3-dimethyl-4-phenyl-, propenoate (ester), cis- (9 CI)
77-20-3
C16-H23-N-O2
MW 261.35

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3369 Blood, plasma	Injection	GC	6	1.12-0.068 ug/ml	Not applicable	0 and 300 min after 0.0454 mg/kg IV in 2 min. Biexponential decline. Non-smokers without recent hepatitis or exposure to medications, about 22 yr old. DRUGS; NARCOTICS; BLOOD PLASMA; ADULTS; CALIFORNIA; COMPARATIVE EVALUATIONS	Fung, D.L. Ashing, J.H. Einele, J.H. Martucci, R. 1980

4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 3,3-dimethyl-6-[[[[[3-(methylsulfonyl)-2-oxo-1-imidazolidinyl]carbonyl]amino]phenylacetyl]amino]-7-oxo-, [2S-[2alpha,5alpha,6beta(S*)]]-
51481-65-3
C21-H25-N5-O8-S2
MW 539.63

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3370 Blood, serum	Injection	Microbiological	8	a) 103-265 ug/ml b) 54-9.3 ug/ml	a) 153 ug/ml b) Not applicable	a) Peaks b) 30 and 240 min, means After 1.0 g IV over 5 min at beginning of 5-hr dialysis. Adults, ages 30-74 yr, undergoing chronic intermittent hemodialysis. DRUGS; ANTIBIOTICS; NEW YORK; KIDNEY DISEASES; HEMODIALYSIS; BLOOD SERUM; ADULTS; COMPARATIVE EVALUATIONS	Francke, E. Mehta, S. Neu, H.C. Appel, G.B. 1979

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenoxyacetamido)-, monopotassium salt (8 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenoxyacetyl)amino)-, monopotassium salt, (2S-(2alpha,5alpha,6beta))- (9 CI)
132-98-9
C16-H18-N2-O5-S.K
MW 389.52

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3371 Blood, serum	Ingestion	Microbiological	a) 16 b) 14	a) 2.1-0 ug/ml b) 1.1-0.02 ug/ml	a) Not given b) Not given	a) Fasted 2 hr before and after dose b) Taken with 118 ml of milk or formula Range of means 0.5-6 hr after 8 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3372 Saliva	Ingestion	Microbiological	a) 16 b) 14	a) Not given b) Not given	a) 0.36 ug/ml b) 0.84 ug/ml	a) Mean peak when fasted 2 hr before and after dose b) Mean peak taken with 118 ml of milk or formula Dose of 8 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3373 Tears	Ingestion	Microbiological	15	a) Not given b) Not given	a) 0.5 ug/ml b) 0.3 ug/ml	a) Mean peak when fasted 2 hr before and after dose b) Mean peak when taken with 118 ml of milk or formula Dose was 8 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-(2-phenylacetamido)-, monosodium salt (8 CI) (VAN)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 3,3-dimethyl-7-oxo-6-((phenylacetyl)amino)- (2S-(2alpha,5alpha,6beta))-, monosodium salt (9 CI)
69-57-8
C16-H18-N2-O4-S.Na
MW 356.38

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3378 Blood, serum	Ingestion	Microbiological	a) 9 b) 16	a) 0.98-0.02 ug/ml b) 0.61-0.02 ug/ml	a) Not given b) Not given	a) Fasted 2 hr before and after dose b) Taken with 118 ml of milk or formula Values are range of means 0.5-6 hr after 8 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-46 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3375 Saliva	Ingestion	Microbiological	23	Not given	8 mg/kg	Mean peak after 8 mg/kg was 0.13 ug/ml 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-46 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3376 Tears	Ingestion	Microbiological	5	Not given	0.09 ug/ml	Mean peak after 8 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-46 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((aminophenylacetyl)amino)-3,3-dimethyl-7-oxo-, 1,3-dihydro-3-oxo-1-isobenzofuranyl ester, (2S-(2alpha,5alpha,6beta(S*)))-
47747-56-8
C24-H23-N3-O6-S
MW 481.52

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3377 Urine	Ingestion	Microbiological GC/MS	3	a) Not given b) Not given c) Not given	a) 83.2% b) 95.0% c) 97.5%	a) 0-24 hr b) 0-48 hr c) 0-144 hr Percent of dose (7 mg/kg) excreted based on radioactive label in the metabolites. Normal adults > 45 yr old. DRUGS; ANTIBIOTICS; URINE; METABOLITES	Jeffery, D.J. Jones, K.H. Langley, P.F. 1978

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((carboxy-3-thienylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2 alpha,5alpha,6beta(S*)))-
34787-01-4
C15-H16-N2-O6-S2
MW 384.45

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3378 Blood, serum	Injection		17	a) Not given b) Not given c) Not given	a) 20 mg/l b) 56 mg/l c) 420 mg/l	a) 6 men, dose 3 g/day for 14 days b) 1 man, dose 3 g/day for 10 days c) 1 man, dose 18 g/day for 12 days Average peak levels Other individual levels for various dose rates given. 18-86 yr old patients with PSEUDOMONAS AERUGINOSA infections. One patient showed evidence of toxicity: falling hemoglobin and platelet levels, in vitro platelet disturbance, hypokalemia and fever. Symptoms disappeared with cessation of therapy. DRUGS; DRUG THERAPY; BLOOD SERUM; URINE; ANTIBIOTICS; AUSTRALIA	Prociv, P. Pearman, J. 1979
3379 Urine	Injection		17	a) Not given b) Not given	a) 700 mg/l b) 3200 mg/l	a) 6 men, dose 3 g/day for 14 days b) 1 man, dose 3 g/day for 10 days Average levels for randomly measured samples Other data available. 18-86 yr old patients with PSEUDOMONAS AERUGINOSA infections. One patient showed evidence of toxicity: falling hemoglobin and platelet levels, in vitro platelet disturbance, hypokalemia and fever. Symptoms disappeared with cessation of therapy. DRUGS; DRUG THERAPY; BLOOD SERUM; URINE; ANTIBIOTICS; AUSTRALIA	Prociv, P. Pearman, J. 1979

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(2-amino-2-(p-hydroxyphenyl)acetamido)-3,3-dimethyl-7-oxo-, D- (8 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((amino(4-hydroxyphenyl)acetyl)amino)-3,3-dimethyl-7-oxo, (2S-(2alpha,5alpha,6beta(S*)))- (9 CI)
26787-78-0
C16-H19-N3-05-S
MW 365.41, MP 194 C (beta-Naphthalenesulfonate trihydrate)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3380 Blood, serum	Ingestion	Microbiological	a) 10 b) 10	a) 6.6-0.5 ug/ml b) 8.6-1.1 ug/ml	a) Not applicable b) Not applicable	a) Range of means 1 and 6 hr after 12.5 mg/kg. Initial value, 3.6 ug/ml at 30 min b) Range of means 2 and 6 hr after 25 mg/kg. Initial value, 3.5 ug/ml at 30 min Large variation among individuals. Montreal Children's Hospital patients with infections for which ampicillin or amoxicillin was prescribed. 50% success rate in treating urinary infections. Side effects: mild diarrhea and vomiting. DRUGS; DRUG THERAPY; ANTIBIOTICS; CANADA; CHILDREN; INFECTION; URINE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Marks, M.I. Vose, A.D. 1978
3381 Urine	Ingestion	Microbiological	10	Not given	40% of dose	6-hr urines Montreal Children's Hospital patients with infections for which ampicillin or amoxicillin was prescribed. 50% success rate in treating urinary infections. Side effects: mild diarrhea and vomiting. DRUGS; DRUG THERAPY; ANTIBIOTICS; CANADA; CHILDREN; INFECTION; URINE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Marks, M.I. Vose, A.D. 1978

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(2-amino-2-phenylacetamido)-3,3-dimethyl-7-oxo, D-(-)- (9 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-((aminophenylacetyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta(S*)))- (9 CI)
69-53-4
C16-H19-N3-O4-S
MW 349.42

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3382 Blood, serum	Ingestion	Microbiological	a) 6 b) 3	a) 3.9-0.8 ug/ml b) 7.8-0.3 ug/ml	a) Not applicable b) Not applicable	a) Range of means 2 and 6 hr after 12.5 mg/kg. Initial value, 2.3 ug/ml at 30 min b) Range of means 1 and 6 hr after 25 mg/kg. Initial value, 3.8 ug/ml at 30 min Large variation among individuals. Montreal Children's Hospital patients with infections for which ampicillin or amoxicillin was prescribed. 5 of 7 were freed of urinary tract infections. Side effects: mild diarrhea and vomiting. DRUGS; DRUG THERAPY; ANTIBIOTICS; CANADA; CHILDREN; INFECTION; URINE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Parks, N.I. Vose, A.D. 1978
3383 Blood, serum	Ingestion	Microbiological	a) 15 b) 14	a) 3.1-0.4 ug/ml b) 2.7-0.8 ug/ml	a) Not given b) Not given	a) Fasted 2 hr before and after dose, mean peak 6.4 ug/ml at 1 hr b) Taken with 110 ml of milk or formula, mean peak 6.1 ug/ml at 2 hr Range of means 0.5-6 hr after 25 mg/kg 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3384 Saliva	Ingestion	Microbiological	a) 15 b) 14	a) 2.9-0.02 ug/ml b) 0.7-0.18 ug/ml	a) Not given b) Not given	a) Fasted 2 hr before and after dose. Mean peak 0.51 ug/ml b) Taken with 110 ml of milk or formula. Mean peak 1.05 ug/ml Values are range of means 0.5-6 hr 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3385 Tears	Ingestion	Microbiological	a) 15 b) 14	a) Not given b) Not given	a) 0.83 ug/ml b) 2.2 ug/ml	a) Mean peak, fasted 2 hr before and after dose b) Mean peak taken with 110 ml milk or formula 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

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4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[2-amino-2-phenylacetamido]-3,3-dimethyl-7-oxo, D-(-)- (8 CI)
4-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[(aminophenylacetyl)amino]-3,3-dimethyl-7-oxo-, [2S-[2alpha,5alpha,6beta(S*)]]- (9 CI)
69-53-4
C16-H19-N3-O4-S
BN 349.42

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	DOSE	MEAN	GENERAL INFORMATION	REFERENCE
3384 Urine	Ingestion	Microbiological	10	Not given	30% of dose	6-hr urines. Montreal Children's Hospital patients with infections for which ampicillin or amoxicillin was prescribed. 5 of 7 were freed of urinary tract infections. Side effects: mild diarrhea and vomiting. DRUGS; DRUG THERAPY; ANTIBIOTICS; CANADA; CHILDREN; INFECTION; URINE; BLOOD SERUM; COMPARATIVE EVALUATIONS	Marks, M.I. Yoma, A.D. 1970

4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(2-ethoxy-1-naphthamido)-3,3-dimethyl-7-oxo- (9 CI)
4-Thia-1-azabicyclo(3.2.0)heptane-2-carboxylic acid, 6-(((2-ethoxy-1-naphthalenyl)carbonyl)amino)-3,3-dimethyl-7-oxo-, (2S-(2alpha,5alpha,6beta))- (9 CI)
147-52-4
C21-H22-N2-O5-S
NR 410.51

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3307 Blood, serum	Injection	Microbiological	24	48.1-1.8 ug/ml	Not applicable	Range of means 0.5 and 4 hr after start of 15-min IV of 37.5 mg/kg. Children, ages 1-163 mo, with staphylococcal infections, Dallas, TX. Phlebitis at infusion site in one, neutropenia in two, and eosinophilia in 6 of 30 patients. DRUGS; DRUG THERAPY; ANTIBIOTICS; TEXAS; CHILDREN; BLOOD SERUM; INFANTS; INFECTION	Feldman, W.E. Nelson, J.D. Stanberry, L.P. 1978

6-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[3-(2,6-dichlorophenyl)-5-methyl-4-isoxazolecarboxamido]-3,3-dimethyl-7-oxo- (8 CI)
6-Thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid, 6-[([3-(2,6-dichlorophenyl)-5-methyl-4-isoxazolyl]carbonyl)amino]-3,3-dimethyl- 7-oxo-, (2S-(2alpha,5alpha,6beta))- (9 CI)
3116-76-5
C19-H17-Cl2-N3-O5-S
MW 470.33, MP Sodium salt monohydrate 222-225 C (decomp)

TISSUE	DISPOSED DOSES	ANALYTICAL METHOD	NUMBER OF CASES	CLASS	MEAN	GENERAL INFORMATION	REFERENCE
3388 Blood, serum	Injection	Microbiological	10	a) 12-40 ug/ml b) 6.5-20 ug/ml	a) 25 ug/ml b) 12.5 ug/ml	a) After 1 hr b) After 3 hr Still detectable at 5 hr 10 children, ages 17 mo-16 yr, with acute osteomyelitis. ANTIBIOTICS; DRUGS; DRUG THERAPY; CHILDREN; BONES; INFECTION; CALIFORNIA; BLOOD SERUM	Bryson, Y.J. Connor, J.D. LeClerc, M. Giacomini, S.T. 1979

4,4'-Bipyridinium, 1,1'-dimethyl-
0685-18-7
C12-H14-N2
MW 186, MP 300 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3389 Blood	Ingestion	RIA	1	a) Not applicable b) Not applicable c) Not applicable	a) 86 ug/l b) 25 ug/l c) 1 ug/l	a) 7 hr b) 30 hr c) 120 hr 50 ml 'Weedol' (5% paraquat) ingested by 32-yr-old patient Values estimated from graph. PESTICIDES; BLOOD; UNITED KINGDOM	Dearnaley, D.P. Martin, N.F.H. 1978
3390 Blood, plasma	Ingestion	GC RIA Colorimetry	79	110-0.01 ug/l	Not given	< or = 15 hr after ingestion of unspecified amounts. Peak levels < 2 hr. Biexponential decay, first phase complete at 15 hr. 2 children, 79 adults, ingested weedkillers containing paraquat. Survived if levels were below 2, 0.6, 0.3, 0.16, 0.1 ug/l at 4, 6, 10, 16, 24 hr after ingestion. Jaundice, renal failure, cyanosis, radiological changes, breathlessness PESTICIDES; UNITED KINGDOM; BLOOD PLASMA	Proudfoot, A.T. Stewart, M.S. Levitt, T. Widdop, B. 1979
3391 Blood, serum	Ingestion		1	a) Not applicable b) Not applicable	a) 0.6 ppm b) 0.25 ppm	a) 12 hr after ingestion of 40-60 ml Gramoxone-S (200 g paraquat/l) b) 23 hr after ingestion, after hemodialysis and hemoperfusion No paraquat detectable 41.5 hr after ingestion. Death occurred 77 hr after ingestion. Values estimated from graph. Additional data available. 23 yr old Suicide Autopsy showed considerable amounts paraquat in the organs. PESTICIDES; BLOOD SERUM; SUICIDE; GERMANY	Obrock, B. Hofmann, H. Henningsen, H. 1976
3392 Blood, serum			1	Not applicable	1.6 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
3393 Brain			1	Not applicable	0.089 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977
3394 Heart			1	Not applicable	0.011 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977

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4,4'-Bipyridinium, 1,1'-dimethyl-
4685-14-7
C12-H14-N2
RN 166, RP 300 C (decomp)

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3395 Kidney			1	0.057-0.062 ppm	0.060 ppm	Poisoning fatality. Range is for right and left kidney. PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977
3396 Liver			a) 1 b) 1	a) 0.015-0.028 ppm b) Not applicable	a) 0.021 ppm b) 680 ppm	a) Case 1 b) Case 2 Poisoning fatalities. PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977
3397 Lung			1	0.013-0.017 ppm	0.015 ppm	Poisoning fatality. Range is for right and left lung. PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977
3398 Spleen			1	Not applicable	0.910 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE	Hayes, W.J., Jr. Vaughn, W.K. 1977
3399 Urine			1	Not applicable	500 ppm	Poisoning fatality PESTICIDES; ARSENIC; ALKALOIDS; CARBON INORGANIC COMPOUNDS; BLOOD; LIVER; KIDNEYS; HAIR; URINE; LUNGS; HEART; SPLEEN; BRAIN; BLOOD SERUM; TENNESSEE; CASE HISTORIES	Hayes, W.J., Jr. Vaughn, W.K. 1977

4,7-Methano-1H-indene, 1,2,3,4,5,6,7,8,8-nonachloro-2,3,3a,4,7,7a-hexahydro-, (1alpha,2beta,3alpha,3aalpha,4beta,7beta,7aalpha)-
39765-80-5
C10-H5-Cl9
mw 406.23

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3600 Adipose		GC GC	168	0.010-0.367 ug/g	0.065 ug/g	Canadians from Eastern Canada (36), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCBACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mes, J. Campbell, D.S. Robinson, B.M. Davies, D.J.A. 1977
3801 Milk			57	Trace-0.01 ppm	<0.01 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCBACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Fatz, F.W. Strassman, S.C. Tobe, A.R. 1976
3802 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-2 ug/g	a) 1 ug/g b) 1 ug/g c) 1 ug/g d) 1 ug/g e) 1 ug/g f) 1 ug/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ug/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; HCBACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979

6,7-Methanoindan, 1,2,3,4,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,4,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H4-Cl8-O
MW 423.77

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3403 Adipose		CC GC	168	0.003-0.336 ug/g	0.055 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; NONACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Ren, J. Campbell, D.S. Robinson, K.W. Davies, D.J.A. 1977
3404 Adipose		GC-EC	898	< or = 1.73 ppm	0.12 ppm	FY 1976. Concentration on lipid basis. Postmortem and biopsies throughout U.S. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; NONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; UNITED STATES	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3405 Milk			57	Trace-0.02 ppm	<0.01 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; NONACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3406 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-2 ng/g	a) 1 ng/g b) 1 ng/g c) 1 ng/g d) 1 ng/g e) 1 ng/g f) 1 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Ren, J. Davies, D.J. 1979

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4,7-Methanoindan, 1,2,3,5,6,7,8,8-octachloro-1,2-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 1a,2,3,3,5,6a,7,7-octachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
26880-48-8
C10-H6-Cl8-O
MW 423.77

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3807 Milk, fat		GC-EC	a) 38 b) 6	a) 0.03-0.70 ppm b) 0-0.12 ppm	a) 0.13 ppm b) 0.050 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EXCXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, B.W. D'Ercole, A.J. Cain, J.D. Arthur, R.D. 1979

4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3408 Adipose		GC-EC	a) 26 b) 22 c) 27 d) 18 e) 18 f) 13	a) <0.0001-0.0102 ppm b) <0.0001-0.0120 ppm c) <0.0001-0.0770 ppm d) <0.0001-0.0037 ppm e) <0.0001-0.0374 ppm f) <0.0001-0.1320 ppm	a) 0.0030 ppm b) 0.0007 ppm c) 0.0085 ppm d) 0.0025 ppm f) 0.0108 ppm	a) Males - stillborn b) Males - 0-11 mo c) Males - 70+ yr d) Females - stillborn e) Females - 0-11 mo f) Females - 70+ yr Autopsy specimens, 1967-1971, from Israelis with no known occupational exposure. PESTICIDES; INSECTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DDD; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; ISRAEL; HEXACHLOROCYCLOHEXANE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Groner, Y. Lazarovici, S. Rosenfeld, B. 1974
3409 Adipose		GC GC	168	0.003-0.477 ug/g	0.043 ug/g	Canadians from Eastern Canada (16), Quebec (50), Ontario (57), Central Canada (22) and Western Canada (27), 1972. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; POLYCHLORINATED BIPHENYLS; DDE; DDD; HCHACHLOR; HEXACHLOROCYCLOHEXANE; OXYCHLORDANE; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; CANADA	Mon, J. Campbell, D.S. Robinson, P.H. Davies, D.J.A. 1977
3410 Adipose		GC-EC	a) 1812 b) 898	a) < or = 10.62 ppm b) < or = 0.77 ppm	a) 0.09 ppm b) 0.08 ppm	a) FY 1970 b) 1974 Concentrations on lipid basis. Postmortems and biopsies throughout U.S. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; UNITED STATES	Kutz, F.W. Strassman, S.C. Yobs, A.P. 1976
3411 Adipose		GC-EC	a) 20 b) 16 c) 22 d) 17	a) <0.0001-0.7765 ppm b) <0.0001-0.6353 ppm c) <0.0001-0.5071 ppm d) <0.0001-0.4858 ppm	a) 0.1110 ppm b) 0.1049 c) 0.1144 d) 0.0738 ppm	a) 0-4 yr old b) 5-24 yr old c) 25-44 yr old d) 45+ yr old Males and females Other data available. Autopsied tissue (1969-70) from individuals with no known occupational exposure who had lived in the Kampala region of Uganda. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; ADIPOSE TISSUE; UGANDA; HEXACHLOROCYCLOHEXANE; DDD; DDE	Wassermann, M. Tomatis, L. Wassermann, D. Day, N.E. Djavaherian, M. 1974

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6,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3812 Adipose		GC-EC	a) 26 b) 39 c) 122 d) 99 e) 151 f) 70	a) Not given b) Not given c) Not given d) Not given e) Not given f) Not given	a) 0.14 ppm b) 0.14 ppm c) 0.11 ppm d) 0.11 ppm e) 0.12 ppm f) 0.11 ppm	a) 1969 b) 1972 c) 1969-72 (females) d) 1969-72 (males) e) 1969-72 (Mexican-American) f) 1969-72 (non Mexican-American) Patients undergoing elective surgery in 1969-72 in the lower Rio Grande Valley of southeast Texas. PESTICIDES; DDT; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; ADIPOSE TISSUE; TEXAS; HEXACHLOROCYCLOHEXANE; DDE; DDD; DIELDRIN; POLYCHLORINATED BIPHENYLS	Burns, J.E. 1974
3813 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.20 ppm b) 0.08 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies b) Danes, 1-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, O.E. Clausen, J. 1979
3814 Adipose			1	Not applicable	0.037 ppm	Concentration unchanged 4-54 days after ingestion of 370.1 g 75% dichlofenthion. Suicide attempt by 62-yr-old male. SUICIDE; FLORIDA; AUTOPSIES; BLOOD SERUM; ADIPOSE TISSUE; LIVER; GALL BLADDER; KIDNEYS; PESTICIDES; ORGANOPHOSPHATES; BLOOD; DDT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; LAVAGE; NEUROLOGIC MANIFESTATIONS; BIOACCUMULATION; METABOLITES	Davies, J.E. Barquet, A. Freed, V.H. Haque, R. Morgade, C. Sonneborn, H.E. Vaclavek, C. 1975
3815 Blood		GC	a) 7 b) 497	a) 2-17 ppb b) Not given	a) 5 ppb b) < 1 ppb	a) Samples in which heptachlor epoxide was positively identified b) All samples Postmortems, Virginia State Medical Examiners Office, 1972. About 45% from white males, 30% from black males, 15% from white females, 10% from black females. CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; VIRGINIA; BLOOD; PESTICIDES; POLYCHLORINATED BIPHENYLS; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; CHLORINATED HYDROCARBONS	Griffith, F.D., Jr. Blanke, R.V. 1975

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4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3816 Blood, plasma		GC	28	Not given	0.0136 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
3817 Blood, serum		GC-EC	21	7-22 ppb	10.9 ppb	Males, household with one or more members in pesticide industry. Residents of Weld County, CO. PESTICIDES; DDT; DDE; LINDANE; HEPTACHLOR EPOXIDE; CHLORINE ORGANIC COMPOUNDS; DIELDRIN; BLOOD SERUM; COLORADO; DUST; HEXACHLOROCYCLOHEXANE	Starr, H.G., Jr. Aldrich, F.D. McDougall, W.D. Mounce, L.M. 1974
3818 Milk			57	Trace-0.03 ppm	<0.01 ppm	Lactating women in selected areas of Arkansas and Mississippi. MILK; PESTICIDES; ADIPOSE TISSUE; METABOLITES; CHLORINE ORGANIC COMPOUNDS; CHLORINATED HYDROCARBONS; LACTATION; OXYCHLORDANE; DDT; HCHACHLOR; HEPTACHLOR EPOXIDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; DDE; ARKANSAS; MISSISSIPPI	Kutz, F.W. Strassman, S.C. Yobs, A.R. 1976
3819 Milk		GC	29	Not given	0.0091 ppm	Higher percentages of organochlorine insecticides and PCB's in milk of mothers 20-29 years than 30-39, although the former had lower levels in plasma. Overweight women had lower levels than women of normal weight. Residues concentrated in extracted lipids of plasma and milk. Israeli women 2-4 days after normal delivery. PESTICIDES; BLOOD PLASMA; MILK; POPULATION EXPOSURE; ISRAEL; CHLORINATED HYDROCARBONS; LIPIDS; AGE; DDT; DDD; DDE; POLYCHLORINATED BIPHENYLS; HEPTACHLOR EPOXIDE; HEXACHLOROCYCLOHEXANE	Polishuk, Z.W. Ron, M. Wassermann, M. Cucos, S. Wassermann, D. Lemesch, C. 1977
3820 Milk		GC TLC	18	0.6-2.6 ppb	1.57 ppb	Milk samples, hospitals in urban Oslo. 4 samples from Hallingdal, a valley in southern Norway. No occupational exposure. MILK; INSECTICIDES; LACTATION; CHLORINATED HYDROCARBONS; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; NORWAY	Bakken, A.F. Seip, M. 1976

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4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3421 Milk		GC	12 of 51	Not given	0.0027 ppm	Random subjects of greater St. Louis, MO, metropoliton area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.K. Armbruster, J. Kettelhut, L.L. Drucker, B. 1977
3422 Milk		GC/MS	a) 10 b) 25 c) 35 d) 10 e) 20 f) Not given	a) Not given b) Not given c) Not given d) Not given e) Not given f) 1-3 ng/g	a) 1 ng/g b) 1 ng/g c) 1 ng/g d) 1 ng/g e) 2 ng/g f) 1 ng/g	a) Eastern Canada b) Quebec c) Ontario d) Central Canada e) Western Canada f) National average, samples above 1 ng/g National Survey, 1975 BIPHENYL COMPOUNDS; CANADA; CHLORINE ORGANIC COMPOUNDS; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; HEXACHLOROCYCLOHEXANE; MILK; NONACHLOR; OXYCHLORDANE; PESTICIDES; POLYCHLORINATED BIPHENYLS; POLYCHLORINATED TERPHENYLS	Mes, J. Davies, D.J. 1979
3423 Milk		GC	a) 27 b) 10 c) 10 d) 40	a) 0-0.008 ppm b) 0-0.21 ppm c) Not given d) 0.001-0.004 ppm	a) 0.007 ppm b) 0.003 ppm c) 0.002 ppm d) 0.003 ppm	a) Cotton, corn, and sesame-growing area b) Corn area c) Banana area d) Coffee-growing area, El Salvador a)-c) in Guatemala. Highest use of pesticides on cotton Women from low income families in Guatemala and El Salvador, chosen to represent different degrees of use of pesticides. Overuse of pesticides a particular problem in tropical countries. Prevalence of malnutrition may contribute to health effects. AGRICULTURE; CHLORINE ORGANIC COMPOUNDS; CROP DUSTING; DDT; DIELDRIN; EL SALVADOR; FOOD CONTAMINATION; GUATEMALA; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; INSECTICIDES; MILK; NUTRITIONAL DEFICIENCIES; PESTICIDES; PESTICIDE RESIDUES	de Campos, N. Olszyna-Marzys, A.E. 1979
3424 Milk, fat		GC-EC	a) 53 b) 33	a) Not detectable-0.060 ppm b) Not detectable-0.113 ppm	a) 0.002 ppm b) 0.028 ppm	a) 1966-1970 study b) 1977-1978 study 1966-70 patients (University of Alberta Hospital), 2-10 days postpartum. 1977-78 patients (public health offices of Alberta), 17-309 days postpartum. Residences, Edmonton or Alberta. MILK; PESTICIDES; HEXACHLOROCYCLOHEXANE; DDD; DDE; DDT; DIELDRIN; HEPTACHLOR EPOXIDE; HEXACHLOROBENZENE; CANADA; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS	Currie, R.A. Kadis, V.W. Breitkreitz, W.E. Cunningham, G.B. Bruns, G.W. 1979

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4,7-Methanoindan, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7a-tetrahydro- (8 CI)
2,5-Methano-2H-indeno(1,2-b)oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro- (9 CI)
1024-57-3
C10-H5-Cl7-O
MW 389.32

(CONTINUED)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3025 Milk, fat		GC-EC	a) 34 b) 6	a) 0.02-0.37 ppm b) 0.01-0.08 ppm	a) 0.08 ppm b) 0.050 ppm	a) High pesticide usage area b) Low pesticide usage area Women living in Starkville, Mississippi (low pesticide usage) and Delta area (high pesticide usage). Samples in 1973-1975. MILK; PESTICIDES; DDE; DDD; DDT; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; OXYCHLORDANE; DIELDRIN; MISSISSIPPI; COMPARATIVE EVALUATIONS; MEASUREMENT METHODS	Barnett, B.W. D'Ercole, A.J. Cain, J.D. Arthur, B.D. 1979

4,7-Methanoindene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (9 CI)
4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro- (9 CI)
76-44-8
C10-H5-Cl7
MW 373.35, MP 95-96 C, VP 3E-10 (E-6) mm Hg at 25 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3026 Adipose	Inhalation Ingestion	GC	a) 33 b) 17	a) Not given b) Not given	a) 0.01 ppm b) 0 ppm	a) Greenlanders, 20-75 yr old, samples taken during acute laparotomies b) Danes, 4-75 yr old, sudden death by suicide or in auto accidents Median values, based on lipid wt Wet wt values available. Greenland nonindustrialized area Denmark industrialized. ADIPOSE TISSUE; AGE; AUTOPSIES; CHLORINE ORGANIC COMPOUNDS; PESTICIDES; DDD; DIT; DDE; DIELDRIN; HEPTACHLOR EPOXIDE; POLYCHLORINATED BIPHENYLS; COMPARATIVE EVALUATIONS; POPULATION EXPOSURE; GREENLAND; DENMARK	Jensen, S.E. Clausen, J. 1976
3027 Milk		GC	3 of 53	Not given	0.019 ppm	Random subjects of greater St. Louis, MO, metropolitan area. PESTICIDES; CHLORINE ORGANIC COMPOUNDS; DDT; DDE; DIELDRIN; HEXACHLOROCYCLOHEXANE; HEPTACHLOR EPOXIDE; MILK; MISSOURI; COMPARATIVE EVALUATIONS	Jonsson, V. Liu, G.J.R. Armbruster, J. Hettelhut, L.L. Drucker, H. 1977

9H-Pyrazolo(3,4-d)pyrimidin-4-one, 1,5-dihydro-
315-30-0
C5-H4-N4-O
MW 136.11, MP 350 C

TISSUE	RESPONSE MODES	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3420 Blood, serum	Injection Ingestion	Colorimetry Enzymatic	a) 6 b) 7	a) 1.1E+0(E-6) - 3.8E+0(E-5) M b) 2.4E+0(E-7) - 2.2E+0(E-6) M	a) 8.2E+0(E-6) M b) 9.5E+0(E-6) M	a) 60 min after injections of 1.1-5.3 mg/kg b) 180 min after injections of 1.1-5.3 mg/kg Patients with lymphoma or other solid tumors. DRUGS; BLOOD SERUM; NEOPLASMS; URINE; ENZYMES; METABOLISM; METABOLITES	Meade, E. Reed, F. Chabner, B. 1978

5-Benzoxazoleacetic acid, 2-(p-chlorophenyl)-alpha-methyl-
51234-28-7
C16-H12-Cl-N-O3
MW 301.74

TISSUE	DISPOSITION ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3029 Blood, plasma	Ingestion	TLC GC	9	19.7-1.6 ug/ml	Not given	Measured up to 96 hr after single 100 mg dose (about 1.4 mg/kg). Peaks in about 3 hr. Healthy males (mean weight 70 kg, range 51-86 kg) DRUGS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; METABOLITES; BLOOD PLASMA; URINE	Chatfield, D.H. Green, J.W. 1978
3030 Urine	Ingestion	TLC GC	9	Not given	35%	Percent of single 100 mg dose (1.2-2.0 mg/kg) excreted in 9 days. Healthy males (mean weight 70 kg, range 51-86 kg). DRUGS; ANTI-INFLAMMATORY AGENTS; ANALGESICS; METABOLITES; BLOOD PLASMA; URINE	Chatfield, D.H. Green, J.W. 1978

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-(2-(1H-tetrazol-1-yl)acetamido)- (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 3-(((5-methyl-1,3,4-thiadiazol-2-yl)thio)methyl)-8-oxo-7-((1H-tetrazol-1-ylacetyl)amino)-, (6R-trans)- (9 CI)
25953-19-9
C14-H14-N8-O4-S3
MW 454.5, MP 190-200 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3431 Blood, serum	Injection	Microbiological	20	Not given	54.33 + or - 15.9 ug/ml	2 hr after injection Lactating women ANTIBIOTICS; DRUGS; DRUG THERAPY; ADULTS; JAPAN; BLOOD SERUM; MILK; LACTATION	Yoshioka, H. Cho, K. Takimoto, H. Narayama, S. Shimizu, T. 1979
3432 Milk	Injection	Microbiological	20	1.16-1.51 ug/ml	Not given	2-4 hr after injection of 2 g. Peak at 3 hr. Lactating women in Japan ANTIBIOTICS; DRUGS; DRUG THERAPY; ADULTS; JAPAN; BLOOD SERUM; MILK; LACTATION	Yoshioka, H. Cho, K. Takimoto, H. Narayama, S. Shimizu, T. 1979

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-(hydroxymethyl)-8-oxo-7-[2-(2-thienyl)acetamido]-, acetate (ester) (8 CI)
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(acetyloxy)methyl]-8-oxo-7-[(2-thienylacetyl)amino]-, [6R-trans]- (9 CI)
153-61-7
C16-H16-N2-O6-S2
MW 396.44

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3833 Blood, serum	Injection	Microbiological	12	1.0-7.3 ug/ml	3.1 ug/ml	Surgical specimens, <1.25-8.25 hr after 3g IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; CYANIDES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, M.M. Herbst, D.V. King, T.M. 1979
3834 Endometrium	Injection	Microbiological	5	1.8-5.0 ug/g	2.2 ug/g	Surgical specimens 1.25-2.25 hr after 3 g IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; CYANIDES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, M.M. Herbst, D.V. King, T.M. 1979
3835 Ovary	Injection	Microbiological	6	2.2-9.2 ug/g	6.2 ug/g	Surgical specimens 1.5-2.25 hr after 3 g IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; CYANIDES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, M.M. Herbst, D.V. King, T.M. 1979
3836 Oviduct	Injection	Microbiological	5	2.8-8.9 ug/g	2.7 ug/g	Surgical specimens 1.5-2.25 hr after 3 g IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; CYANIDES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, M.M. Herbst, D.V. King, T.M. 1979
3837 Uterus	Injection	Microbiological	10	a) 3.0-12.0 ug/g b) 1.0-8.0 ug/g	a) 3.6 ug/g b) 2.3 ug/g	a) Cervix b) Myometrium Surgical specimens 1.25-8.25 hr after 3 g IV. Hysterectomy patients. Ages 25-66 yr. DRUGS; DRUG THERAPY; ANTIBIOTICS; CYANIDES; OVIDUCT; UTERUS; MARYLAND; BLOOD SERUM	Whelton, A. Blanco, L.J. Carter, G.G. Craig, T.J. Bryant, M.M. Herbst, D.V. King, T.M. 1979

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(amino-1,4-cyclohexadien-1-ylacetyl)amino]-3-methyl-8-oxo-, (6R-(6alpha,7beta(R*)))-
33821-53-3
C16-H19-N3-O4-S
MW 349.41, MP 190-192 C (decomp)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3839 Blood, serum	Ingestion	Microbiological	8	a) 28.6-2.6 ug/ml b) 3.7-44.9 ug/ml	a) Not given b) Not given	a) Range of means 75 and 240 min after 1 g/8 hr. Initial value, 3.0 ug/ml at 15 min b) Range of means 15 and 81.5 min after 2 g/8 hr. Final value, 7.6 ug/ml at 8 hr Healthy volunteers 22-32 yr old. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD SERUM; ADULTS; NEW YORK; CONNECTICUT; COMPARATIVE EVALUATIONS; URINE; INFECTION	Chow, M. Quintiliani, R. Cunha, B.A. Thompson, M. Finkelstein, E. Nightingale, C.H. 1979
3839 Urine	Ingestion	Microbiological	8	a) 88.5-1126.6% of dose b) 89.7-96.3% of dose	a) 103.2 + or - 9% of dose b) 89.7 + or - 11% of dose	a) 7 doses of 1 g/8 hr b) 5 doses of 2 g/6 hr Recoveries, between doses and 24 hr after final dose. Healthy volunteers 22-32 yr old. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD SERUM; ADULTS; NEW YORK; CONNECTICUT; COMPARATIVE EVALUATIONS; URINE; INFECTION	Chow, M. Quintiliani, R. Cunha, B.A. Thompson, M. Finkelstein, E. Nightingale, C.H. 1979

5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-((aminophenylacetyl)amino)-3-chloro-8-oxo-, (6R-(6alpha,7beta(R*)))-
52994-73-3
C15-H14-Cl-N3-O4-S
NW 367.83

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3440 Blood, serum	Ingestion	Microbiological	10	a) 6.09-2.49 ug/ml b) 12.9-4 ug/ml	a) Not given b) Not given	a) Range of means 1 and 2 hr after 250 mg. Initial value, 4.8 ug/ml at 0.5 hr b) Range of means 1 and 2 hr after 500 mg. Initial value, 9 ug/ml at 0.5 hr Clearance by 4 hr. Normal volunteers ages 22-62 yr. ANTIBIOTICS; DRUGS; DRUG THERAPY; ADULTS	Meyers, B.P. Hirschman, S.Z. Wormser, G. Gartenberg, G. Srulevitch, E. 1978
3441 Urine	Ingestion	Microbiological	15	a) Not given b) Not given c) Not given d) Not given e) 31.8-18.6% of daily dose f) 40.6-22.2% of daily dose	a) 43% of dose b) 45% of dose c) 43% of dose d) 48% of dose e) Not applicable f) Not applicable	a) 0.8 hr, 250 mg b) 0-24 hr, 250 mg c) 0-8 hr, 500 mg d) 0-24 hr, 500 mg e) Mean daily excretion day %3, 250 mg q.i.d. f) Mean daily excretion day %3, 500 mg q.i.d.. Normal volunteers ages 22-62 yr. ANTIBIOTICS; DRUGS; DRUG THERAPY; ADULTS	Meyers, B.P. Hirschman, S.Z. Wormser, G. Gartenberg, G. Srulevitch, E. 1978

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(hydroxyphenylacetyl)amino]-3-[[(1-methyl-1H-tetrazol-5-yl)thio]methyl]-8-oxo -, [6R-[6alpha,7beta(R*)]]-
30044-91-4
C10-H10-N6-O5-S2
MW 462.54

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3882 Blood, plasma	Injection	Microbiological	16	a) 112.0-312.0 ug/ml b) 32.5-92.0 ug/ml c) 5.7-39.8 ug/ml	a) 172.3 ug/ml b) 52.7 ug/ml c) 18.9 ug/ml	a) 2 min after infusion of drug b) 42 min after infusion-just before bypass c) 172 min after infusion-just after bypass Each value for 16 doses treated with 20 mg/kg. 11 males, average age 51.9 yr, average wt 83.0 kg. 5 females, average age 55 yr, average wt 68.3 kg. All with angina, having saphenous vein bypass surgery at the Medical College of Virginia. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD PLASMA; SURGERY; VIRGINIA	Polk, R.E. Archer, G.L. Lover, E. 1978

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[2-amino-2-phenylacetamido]-3-methyl-8-oxo-, D- (8 CI)
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-methyl-8-oxo-, (6R-(6alpha,7beta(R*)))- (9 CI)
15686-71-2
C16-H17-N3-O4-S
MW 347.4

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3844 Blood, serum	Ingestion	Microbiological	8	a) 2.7-33.2 ug/ml b) 4.6-50.5 ug/ml	a) Not given b) Not given	a) Range of means 15 and 65.5 min after 1 g/8 hr. 0.1 ug/ml at 8 hr (final value) Range of means 15 and 83.7 min after 2 g/6 hr. 9.1 ug/ml at 8 hr (final value) Healthy volunteers 22-32 yr old. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD SERUM; ADULTS; NEW YORK; CONNECTICUT; COMPARATIVE EVALUATIONS; URINE; INFECTION	Chow, M. Quintiliani, R. Cunha, B.A. Thompson, E. Finkelstein, F. Nightingale, C.H. 1979
3844 Blood, serum	Ingestion		18	a) 19-20 ug/ml b) 20-25 ug/ml	a) Not given b) Not given	a) Range of mean peaks after capsule b) Range of mean peaks after suspension Doses of 25 mg/kg/body wt Infants and children with hematogenous osteomyelitis or suppurative arthritis at hospitals in Dallas, Texas. DRUGS; BLOOD SERUM; DRUG THERAPY; DISEASES; CHILDREN; INFANTS; TEXAS	Tetzlaff, T.R. McCracken, G.H. Nelson, J.D. 1978
3845 Blood, serum	Ingestion	Microbiological	15	a) 10.1-35 ug/ml b) 5.8-27 ug/ml c) 12.6-25 ug/ml d) 18.5-22.5 ug/ml	a) 19.5 + or - 3.0 ug/ml b) 19.8 + or - 3.8 ug/ml c) 20.7 + or - 3.7 ug/ml d) 19.6 + or - 2.2 ug/ml	a) Peak level-2 hr. Drug in capsule, patient fasting b) Peak level-2 hr. Drug in capsule, patient fed c) Peak level-0.5 hr. Drug in suspension, patient fasting d) Peak level-0.5 hr. Drug in suspension, patient fed 9 patients in a) and b), 6 in c) and d) Dosage: 25 mg/kg Pharmacokinetic data available 7-10 yr olds, part of evaluation of oral antibiotic therapy for osteomyelitis and septic arthritis of childhood. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD SERUM; CHILDREN; ADOLESCENTS; COMPARATIVE EVALUATIONS; TEXAS	Tetzlaff, T.R. McCracken, G.H., Jr. Thomas, M.L. 1978
3846 Blood, serum	Ingestion	Microbiological	a) 11 b) 9	a) 23.4-0.5 ug/ml b) 8.7-0.3 ug/ml	a) Not given b) Not given	a) Fasted 2 hr before and after dose, mean peak (23.4 ug/ml) at 0.5 hr b) Taken with 118 ml milk or formula, mean peak (8.0 ug/ml) at 1 hr Range of means 0.5-6 hr after 25 mg/kg. No effect of feeding on half-life 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-86 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978

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5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-(2-amino-2-phenylacetamido)-3-methyl-8-oxo-, D- (8 CI)
5-Thia-1-azabicyclo(4.2.0)oct-2-ene-2-carboxylic acid, 7-[(aminophenylacetyl)amino]-3-methyl-8-oxo-, (6R-(6alpha,7beta(R*)))- (9 CI)
15686-71-2
C16-H17-N3-O4-S
MW 347.4

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3447 Saliva	Ingestion	Microbiological	20	0-1.5 ug/ml	Not given	Overall range 2-6 hr after 15 mg/kg. Mean peak 0.5 ug/ml. No effect of feeding 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3448 Tears	Ingestion	Microbiological	15	0-0.2 ug/ml	Not given	Overall range after 15 mg/kg. Mean peak 0.9 ug/ml. No effect of feeding 169 studies were done with 106 infants and children. Infants and children with mild mucocutaneous infections, otitis media, and pharyngitis, ages 2-96 months. ANTIBIOTICS; CHILDREN; FOODS; BLOOD SERUM; SALIVA; TEARS; TEXAS; INFANTS; COMPARATIVE EVALUATIONS	McCracken, G.H. Ginsburg, C.M. Clahsen, J.C. Thomas, M.L. 1978
3449 Urine	Ingestion	Microbiological	8	a) 81.8-100.8% of dose b) 87.3-95.6% of dose	a) 91.1 + or - 7.6% of dose b) 91.9 + or - 6.6% of dose	a) 7 doses of 1 g/8 hr b) 5 doses of 2 g/6 hr Recoveries, between doses and 24 hr after final dose. Healthy volunteers 22-32 yr old. DRUGS; DRUG THERAPY; ANTIBIOTICS; BLOOD SERUM; ADULTS; NEW YORK; CONNECTICUT; COMPARATIVE EVALUATIONS; URINE; INFECTION	Chow, N. Quintiliani, R. Cunha, B.A. Thompson, M. Finkelstein, E. Nightingale, C.H. 1979

5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 7-[2-cyanoacetamido]-3-(hydroxymethyl)-8-oxo-, acetate (ester), monosodium salt (8 CI)
5-Thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid, 3-[(acetyloxy)methyl]-7-[(cyanoacetyl)amino]-8-oxo-, monosodium salt, (6R-trans)- (9 CI)
23239-51-0
C13-H13-N3-O6-S.Na
MW 361.31, HP Free base, needles from acetone and ether, 168-170 C (decomp)

TISSUE	DISPOSAL ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3450 Blood, serum	Injection	Microbiological	10	a) 25-45.5 ug/ml b) 12-41 ug/ml	a) 35.3 ug/ml b) 25.3 ug/ml	a) Thigh injection b) Buttock injection Peaks (at 30-45 min) after 1-g dose. Healthy males (8) and females (2), adult volunteers. DRUGS; ANTIBIOTICS; BLOOD SERUM; URINE; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Reeves, D.S. Bywater, M.J. Wise, R. Whitmarsh, V.P. 1978
3451 Urine	Injection	Microbiological	10	a) 688-1114 mg b) 603-977 mg	a) 878 mg b) 769 mg	a) Thigh injection b) Buttock 6-hr excretion after 1-g dose. Healthy males (8) and females (2), adult volunteers. DRUGS; ANTIBIOTICS; BLOOD SERUM; URINE; UNITED KINGDOM; COMPARATIVE EVALUATIONS	Reeves, D.S. Bywater, M.J. Wise, R. Whitmarsh, V.P. 1978

5beta-Cardanolide, 3beta-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo- hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy- (8 CI)
Cardanolide, 3-((O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-O-2,6-dideoxy-beta-D-ribo-hexopyranosyl-(1-4)-2,6-dideoxy-beta-D-ribo-hexopyranosyl)oxy)-14-hydroxy-, (3beta,5beta)- (9 CI)
3706-76-3
C41-866-013
BU 327.67

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3452 Blood, plasma	Injection	GC/MS	a) 7 b) 7	a) <0.5-1.7 ng/ml b) 6.4-12.4 ng/ml	a) Not given b) 8.9 ng/ml	a) Patients with no renal insufficiency b) Patients with renal insufficiency Healthy volunteers ages 29 to 37. Patients with heart failure, taking daily oral maintenance doses of digitoxin. Patients with renal failure under chronic oral digitoxin treatment. DRUGS; BLOOD PLASMA; HEART DISEASES; KIDNEYS; ADULTS; GERMANY; DISEASES	Boden, G. Onruh, M.V. 1979

5H-Cyclooct(b)indole, 5-(3-(dimethylamino)propyl)-6,7,8,9,10,11-hexahydro- (8 CI)
5H-Cyclooct(b)indole-5-propanamine, 6,7,8,9,10,11-hexahydro-N,N-dimethyl- (9 CI)
5560-72-5
C19-H28-N2
MW 288.43

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3453 Blood, plasma	Ingestion	Radiometry TLC	12	0.40-trace ug drug equiv/ml	Not given	2 and 48 hr after 35 mg, labelled dose. Trace at 0.5 hr, initial value. No unchanged iprindole detected at 2 hr. Healthy males DRUGS; METABOLITES; BLOOD; BLOOD PLASMA; URINE; FECES; COMPARATIVE EVALUATIONS; ANTIDEPRESSIVE AGENTS	Sisenwine, S.F. Tio, C.O. Fuelins, H.W. 1979
3454 Blood, whole	Ingestion	Radiometry TLC	12	0.24-trace ug drug equiv/ml	Not given	2 and 48 hr after 35 mg, labelled dose. Trace at 0.5 hr, initial value.. No unchanged drug at 2 hr. Healthy males DRUGS; METABOLITES; BLOOD; BLOOD PLASMA; URINE; FECES; COMPARATIVE EVALUATIONS; ANTIDEPRESSIVE AGENTS	Sisenwine, S.F. Tio, C.O. Fuelins, H.W. 1979
3455 Urine	Ingestion	Radiometry	12	a) Not given b) Not given	a) 38.7% b) 41.9%	a) 0-24 hr b) 0-168 hr % of dose after 35 mg. Metabolic conversion and conjugation extensive. 21.5% of dose in 0-168 hr feces. Healthy males DRUGS; METABOLITES; BLOOD; BLOOD PLASMA; URINE; FECES; COMPARATIVE EVALUATIONS; ANTIDEPRESSIVE AGENTS	Sisenwine, S.F. Tio, C.O. Fuelins, H.W. 1979

5H-Dibenz(b,f)azepine-5-carboxamide
298-46-4
C 15-H 12-N2-O
MW 236.26, MP 200-206 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3656 Blood, plasma	Ingestion	HS	3	12.1-36.3 umoles/l	Not given	On doses ranging from 8.8-17.5 umoles/kg 2x/day Children treated for psychomotor epilepsy, ages 10-13 yr. Undesirable side effects, may be temporary. PSYCHOTROPIC DRUGS; DRUGS; DRUG THERAPY; CHILDREN; BLOOD PLASMA; NERVOUS SYSTEM DISEASES; DISEASES; ANTICONVULSANTS; SWEDEN	Bertilsson, L. Hofer, B. Tybring, G. Osterloh, J. Rane, A. 1980

5H-Dibenz(b,f)azepine, 10,11-dihydro-5-(3-(methylamino)propyl)- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N-methyl- (9 CI)
50-47-5
C19-H22-N2
MW 266.37, BP 172-17a C 0.02 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3457 Blood	Ingestion	GC	2	2.7-16.8 ug/ml	Not given	2 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan to Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3458 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 55.9 ng/ml b) 62.4 ng/ml c) 105.2 ng/ml d) 217.7 ng/ml	a) 100 mg daily b) 100 mg daily c) 150 mg daily d) 200 mg daily 9-10 samples each case Steady-state levels Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978
3459 Blood, plasma		GC/MS	5	8-100 ng/ml	60 ng/ml	Patients being treated with 150-300 mg/day imipramine. Imipramine levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978
3460 Heart	Ingestion	GC	1	86.7 ug/g	Not given	1 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3461 Liver	Ingestion	GC	2	37.6-294.3 ug/g	Not given	2 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979

5H-Dibenz(b,f)azepine, 3-chloro-5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 3-chloro-10,11-dihydro-N,N-dimethyl- (9 CI)
303-49-1
C19-H23-Cl-N2
MW 314.87, BP 160-170 C at 0.3 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3462 Blood, plasma	Ingestion	GC	6	a) Not given b) Not given	a) 20 ng/ml b) 7.5 ng/ml	a) Peak - 6 hr after 50 mg b) 24 hr after 50 mg Estimated from graph Interaction with noradrenalin studied. Healthy volunteers, 21-26 yr old. DRUGS; ANTIDEPRESSIVE AGENTS; METABOLISM; METABOLITES; BLOOD PLASMA; SWEDEN	Borg, K.-O. Johnsson, G. Jordo, L. Lundborg, P. Rona, O. Welin-Fogelberg, I. 1979
3463 Blood, plasma	Ingestion	GC	27	a) 77-587 nmoles/l b) 116-909 nmoles/l	a) 201 nmoles/l b) 451 nmoles/l	a) Chlorimipramine b) Metabolite, desmethylchlorimipramine During third wk, on 150 mg/day divided into 3 daily doses. Sampled before morning dose. Patients with primary depressive illness, 19-68 yr of age. Level of desmethyl metabolite directly correlated with relief of depression. DRUGS; METABOLITES; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; NEUROLOGIC MANIFESTATIONS; BEHAVIOR DISORDERS	Traskman, L. Asberg, M. Bertilsson, L. Gronholm, B. Wellstrom, B. Weckers, L.M. Sjoqvist, F. Thoren, P. Tybring, G. 1979

5H-Dibenz(b,f)azepine, 5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5P-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl- (9 CI)
50-49-7
C19-H24-N2
MW 280.40, BP 160 C at 0.01 mm Hg

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3464 Blood	Ingestion	GC	2	a) 0.5-10.2 ug/ml b) 2.7-5.2 ug/ml	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 2 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan to Oct 1978. DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3465 Blood			13	0.1-27.0 ug/ml	5.9 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem finding DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3466 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 133.9 ng/ml b) 390.7 ng/ml c) 190.3 ng/ml d) 221.7 ng/ml	a) 150 mg daily b) 150 mg daily c) 200 mg daily d) 200 mg daily 10 samples each case Values are total tricyclic amines. Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978
3467 Blood, plasma		GC/MS	5	12-66 ng/ml	33 ng/ml	Patients being treated with 150-300 mg/day. Metabolite desipramine levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978
3468 Blood, plasma	Ingestion	GC	14	a) 3.1-32.0 ng/ml b) 1.1-31.0 ng/ml	a) Not applicable b) Not applicable	a) 0.67 and 4 hr means, syrup. Final value, 6.9 ng/ml at 24 hr b) 0.67 and 4 hr means, tablets. Final value, 7.1 ng/ml at 24 hr All subjects received 75-mg dose as 25-mg tablets or 5 mg/ml-syrup. Subjects differed, P<0.01. Syrup and tablets differed only in lag time, P<0.05. Healthy Caucasions, ages 19-27 yr, without gastrointestinal, hepatic, cardiac or renal disease, no drugs or alcohol 48 hr before to 24 hr after study. Fasted before and after dose. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; ADULTS; CANADA; COMPARATIVE EVALUATIONS	Gagnon, M.A. Dupuis, C. Bertrand, M.J. Elie, R. Dugal, R. 1980

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5H-Dibenz(b,f)azepine, 5-(3-(dimethylamino)propyl)-10,11-dihydro- (8 CI)
5H-Dibenz(b,f)azepine-5-propanamine, 10,11-dihydro-N,N-dimethyl- (9 CI)
50-49-7
C19-H24-N2
MW 280.40, BP 160 C at 0.01 mm Hg

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3869 Blood, plasma	Ingestion	GC	6	a) Not given b) Not given	a) 9.0 ng/ml b) 3.8 ng/ml	a) Peak - 6 hr after 25 mg b) 24 hr after 25 mg Estimated from graph Interaction with noradrenalin studied. Healthy volunteers, 21-26 yr old. DRUGS; ANTIDEPRESSIVE AGENTS; METABOLISM; METABOLITES; BLOOD PLASMA; SWEDEN	Borg, K.-O. Johnsson, G. Jordo, L. Lundborg, P. Roan, O. Welin-Fogelberg, I. 1979
3870 Heart	Ingestion	GC	2	a) 3.2-82.7 ug/g b) 35.2-43.0 ug/g	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 2 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3871 Liver	Ingestion	GC	2	a) 21.9-314.0 ug/g b) 218.0-353.0 ug/g	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 2 of 29 cases. Tricyclic antidepressand overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979

5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N-methyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N-methyl- (9 CI)
72-69-5
C19-H21-N
MW 263.37, MP 213-215

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3472 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 125.6 ng/ml b) 78.3 ng/ml c) 65.1 ng/ml d) 150.7 ng/ml	a) 100 mg daily, b) 100 mg daily c) 100 mg daily d) 150 mg daily 9-10 samples each case Steady-state levels. Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITIES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978
3473 Blood, plasma		GC/MS	5	37-125 ng/ml	76 ng/ml	Patients being treated with 100-300 mg/day amitriptyline. Amitriptyline levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978
3474 Blood, plasma		GC	49	a) 27-298 ng/day b) 18-367 ng/day c) 15-317 ng/day	a) 107 ng/day b) 110 ng/day c) 103 ng/day	a) 2 wk of treatment b) 4 wk of treatment c) 6 wk of treatment Dose of 150 mg/day. All patients had depressive illnesses meeting RDC criteria for primary depressive disorder and were 19-67 yr old. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; DRUG THERAPY	Robinson, D.S. Cooper, T.B. Pavaris, C.L. Ives, J.O. Wies, A. Bartlett, D. Lamborn, K.R. 1979
3475 Blood, plasma	Ingestion	GC-EC	17	a) 24.0-98.0 ug/l b) 15.5-70.0 ug/l c) 8.0-62.0 ug/l d) 120-681 ug/l	a) 52.2 ug/l b) 33.1 ug/l c) 22.5 ug/l d) 293 ug/l	a) 24-hr after single 100-mg dose b) 48 hr after single 100-mg dose c) 72-hr after single 100-mg dose d) Steady-state after 100 mg nightly for 4 wk High correlation between single-dose 48-hr and steady-state levels. Patients with endogenous depression, 23-71 yr. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA	Braithwaite, P. Montgomery, S. Dawling, S. 1978
3476 Blood, plasma	Ingestion	GC	18	120-681 ug/l	290 ug/l	Mean daily dose of 1.45 mg/kg for men and 1.8 mg/kg for women. For treatment, high levels less effective than intermediate levels. Patients with endogenous depression. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA	Montgomery, S. Braithwaite, P. Dawling, S. McAuley, R. 1978

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N-methyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N-methyl- (9 CI)
72-69-5
C19-H21-N
MW 263.37, MP 213-215

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3477 Blood, plasma	Ingestion	GC-EC	10	a) 20-43 ng/ml b) 15-50 ng/ml c) 70-170 ng/ml d) 39-172 ng/ml	a) 32 ng/ml b) 31 ng/ml c) 120 ng/ml d) 96 ng/ml	a) Dose at 9 A.M., peaks 3-12 hr, nortriptyline b) Dose at 9 P.M., peaks 4-24 hr, nortriptyline c) Dose at 9 A.M., peaks 3-4 hr, 10-hydroxynortriptyline d) Dose at 9 P.M., peaks 4-12 hr, 10-hydroxynortriptyline Peaks after 100-mg doses. Healthy volunteers, ages 22-30 yr. Allowed to eat 2-3 hr before dose. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; ADULTS; SEDATIVES; COMPARATIVE EVALUATIONS; METABOLISM; METABOLITES	Nakano, S. Hollister, L.E. 1978
3478 Blood, plasma	Ingestion	GC/MS	4	5.9-12.3 ng/ml	10 ng/ml	Peaks after 75 mg amitriptyline hydrochloride. Peak times 8-11 hr. Elimination paralleled but lagged amitriptyline. Healthy smokers, ages 28-32 yr. Drowsiness, orthostatic hypotension and sleep. Symptoms peaked at 2-6 hr. ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; ADULTS; DRUGS; DRUG THERAPY; METABOLITES	Ziegler, V.E. Figge, J.T. Ardekani, A.R. Rosen, S.H. 1978

5H-Dibenzo(a,d)cycloheptene-Delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cycloheptene-5-ylidene)-N,N-dimethyl- (8 CI)
50-48-6
C20-H23-N
MW 277.33, MP Hydrochloride 196-197 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3479 Blood	Ingestion	GC	14	a) 0.1-5.1 ug/ml b) Not detected-6.5 ug/ml	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 14 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA, Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3480 Blood			1	Not applicable	0.7 mg/100 ml	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE	Siek, T.J. 1978
3481 Blood			35	0.1-114.0 ug/ml	7.0 ug/ml	Death caused by drug combinations Records of 1239 deaths in U.S. and Canada. In all, diazepam or its metabolite were present in the tissues and, in most cases, more than one drug was found. Ages: less than 5-greater than 65 yr. High frequency of suicide. Other data available. Pulmonary and visceral congestion most common postmortem findirg DRUGS; DRUG ABUSE; CANADA; UNITED STATES; UTAH; SEDATIVES; HYPNOTICS; PSYCHOTROPIC DRUGS; BLOOD; LIVER; KIDNEYS; ALCOHOLIC BEVERAGES; FORENSIC MEDICINE	Finkle, B.S. McCloskey, K.L. Goodman, L.S. 1979
3482 Blood, plasma	Ingestion	GC	1	a) Not given b) Not given c) Not given d) Not given	a) 187.0 ng/ml b) 89.0 ng/ml c) 94.4 ng/ml d) 154.0 ng/ml	a) 100 mg daily b) 100 mg daily c) 100 mg daily d) 150 mg daily 9-10 samples each case Values are total tricyclic amines. Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978
3483 Blood, plasma		GC/MS	5	28-198 ng/ml	83 ng/ml	Patients being treated with 100-300 mg/day amitriptyline. Metabolite nortriptyline levels also measured. ANTIDEPRESSIVE AGENTS; DRUGS; BLOOD PLASMA; MEASUREMENT METHODS	Jenkins, R.G. Friedel, R.O. 1978

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (8 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cyclohepten-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-6
C20-H23-N
MW 277.39, MP Hydrochloride 196-197 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3484 Blood, plasma		GC	49	a) 27-228 ng/ml b) 25-236 ng/ml c) 21-225 ng/ml	a) 89 ng/ml b) 86 ng/ml c) 86 ng/ml	a) 2 wk of treatment b) 4 wk of treatment c) 6 wk of treatment Dose of 150 mg/day. All patients had depressive illnesses meeting RDC criteria for primary depressive disorder and were 19-67 yr old. DRUGS; ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; DRUG THERAPY	Robinson, D.S. Cooper, T.B. Navaris, C.L. Ives, J.O. Nies, A. Bartlett, D. Lamborn, K.R. 1979
3485 Blood, plasma	Ingestion Injection	GC	a) 8 b) 9 c) 11 d) 20	a) 75-360 ng/ml b) 45-185 ng/ml c) 75-390 ng/ml d) 55-210 ng/ml	a) 216.8 ng/ml b) 100.6 ng/ml c) 258.6 ng/ml d) 156.0 ng/ml	a) Amitriptyline + nortriptyline, after 150 mg/day orally, 31% as nortriptyline b) Amitriptyline + nortriptyline, after 120 mg/day IM, 48% as nortriptyline c) Amitriptyline + nortriptyline, after 150 mg/day oral amitriptyline + 25-300 mg/day phenothiazine, 56% as nortriptyline d) Amitriptyline + nortriptyline, after 120 mg/day IM amitriptyline + 25-300 mg/day phenothiazine, 53% as nortriptyline Steady state values. All patients received 2.5-40 mg/day benzodiazepine. Phenothiazine increased nortriptyline levels. Ranges estimated from graph. Inpatients, ages 18-77 yr treated for depression. High Hamilton scores associated with high plasma nortriptyline. The curvilinear correlation greater in patients who also received phenothiazine, P<0.005. DRUGS; ANTIDEPRESSIVE AGENTS; ADULTS; FRANCE; BLOOD PLASMA; METABOLISM; METABOLITES	Vandel, B. Vandel, S. Allers, G. Bechtel, P. Volmat, P. 1979
3486 Blood, plasma	Ingestion	GC/MS	4	10.8-43.7 ng/ml	20.0 ng/ml	Peaks after 75 mg hydrochloride. Peak times 2-6 hr. Healthy smokers, ages 28-32 yr. Drowsiness, orthostatic hypotension and sleep. Symptoms peaked at 2-6 hr. ANTIDEPRESSIVE AGENTS; BLOOD PLASMA; ADULTS; DRUGS; DRUG THERAPY; METABOLITES	Ziegler, V.E. Biggs, J.T. Ardekani, A.R. Rosen, S.F. 1978
3487 Bone	Ingestion	GC/MS	1	Not applicable	0.07 mg/51.8 g	Recovered from bone marrow Deceased 47 yr old white female in California Decomposed and skeletonized body, missing 9 months. CASE HISTORIES; DRUGS; ANTIDEPRESSIVE AGENTS; CALIFORNIA	Noguchi, T.T. Nakamura, G.R. Griesemer, T.C. 1978

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5H-Dibenzo(a,d)cycloheptene-delta(5,gamma)-propylamine, 10,11-dihydro-N,N-dimethyl- (9 CI)
1-Propanamine, 3-(10,11-dihydro-5H-dibenzo(a,d)cycloheptan-5-ylidene)-N,N-dimethyl- (9 CI)
50-48-6
C20-H23-N
MW 277.39, MP Hydrochloride 196-197 C

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TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3488 Heart	Ingestion	GC	14	a) 0.4-49.1 ug/g b) Not detected-21.2 ug/g	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 14 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3489 Liver	Ingestion	GC	14	a) 2.7-282.0 ug/g b) 8.2-456.0 ug/g	a) Not given b) Not given	a) Parent drug b) N-desmethyl metabolite 14 of 29 cases. Tricyclic antidepressant overdose fatalities (from 961 suspected drug abuse cases investigated in San Diego, CA Jan-Oct 1978). DRUGS; ANTIDEPRESSIVE AGENTS; DRUG ABUSE; BLOOD; LIVER; HEART; CALIFORNIA	Bailey, D.N. Shaw, R.F. 1979
3490 Liver			1	Not applicable	30 mg/100 g	Medical examiner cases of deaths from intentional or accidental OD, or undetermined or natural causes. DRUGS; AUTOPSIES; MEPERIDINES; SUICIDE; BLOOD; URINE; LIVER; BILE; DRUG ABUSE	Siek, T.J. 1978
3491 Muscle	Ingestion	GC/MS	1	Not applicable	0.95 mg/50 g	Recovered from leg muscle Deceased 47 yr old white female in California Decomposed and skeletonized body, missing 8 months. CASE HISTORIES; DRUGS; ANTIDEPRESSIVE AGENTS; CALIFORNIA	Noguchi, T.T. Nakamura, G.R. Griesemer, E.C. 1979

5H-Dibenzo(a,d)cycloheptene-5-propylamine, N-methyl- (8 CI)
5H-Dibenzo(a,d)cycloheptene-5-propanamine, N-methyl- (9 CI)
439-60-8
C19-H21-N
MW 263.37, MP Hydrochloride 169-171 C (crystals from isopropanol-ethyl ether)

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3492 Blood, plasma	Ingestion	GC	a) 1 b) 1 c) 1	a) Not given b) Not given c) Not given	a) 111.6 ng/ml b) 114.3 ng/ml c) 164.2 ng/ml	a) 20 mg daily b) 30 mg daily c) 40 mg daily Steady-state levels. 9-10 samples each case Outpatients treated for depression. DRUGS; ANTIDEPRESSIVE AGENTS; PSYCHOTROPIC DRUGS; METABOLITES; BLOOD PLASMA; UNITED STATES	Ziegler, V.E. Wylie, L.T. Biggs, J.T. 1978

6H-Dibenzo(b,d)pyran-1-ol, 6a,7,8,10a-tetrahydro-6,6-9-trimethyl-3-pentyl-, (6aR-trans)-
1972-09-3
C21-H30-O2
MW 314.45

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3493 Blood, plasma	Inhalation	RIA	a) 2 b) 2 c) 2 d) 4 e) Not given	a) 25-70 ng/ml b) 20-25 ng/ml c) 3-15 ng/ml d) 6-59 ng/ml e) <6 ng/ml	a) Not given b) Not given c) Not given d) Not given e) Not given	a) Heavy smokers 15 min after cigarette with 5 mg THC b) Heavy smokers 60 min after cigarette with 5 mg THC c) Light smokers 15 min after cigarette with 5 mg THC d) Drug clinic patients e) Controls DRUGS; PSICHOTROPIC DRUGS; BLOOD PLASMA; MEASUREMENT METHODS; URINE; UNITED KINGDOM; SMOKING	Teale, J.D. King, L.J. Forman, R.J. Marks, V. 1974
3494 Urine	Inhalation	RIA	a) 8 b) 7 c) 10	a) 15-52 ng/ml b) 3-416 ng/ml c) < 3 ng/ml	a) Not given b) Not given c) Not given	a) First 24 hr after cigarette with 5 mg THC b) Random sample of drug clinic patients c) Controls DRUGS; PSICHOTROPIC DRUGS; BLOOD PLASMA; MEASUREMENT METHODS; URINE; UNITED KINGDOM; SMOKING	Teale, J.D. King, L.J. Forman, R.J. Marks, V. 1974

9,10-Ethanoanthracene-9(10H)-propylamine, N-methyl- (8 CI)
9,10-Ethanoanthracene-9(10H)-propanamine, N-methyl- (9 CI)
10262-69-8
C20-H23-N
MW 277.41, ME 92-94 C

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3495 Blood, serum			a) 1 b) 1 c) 1 d) 1	a) Not given b) Not given c) Not given d) Not given	a) 130 + or - 19 ng/ml b) 123 + or - 9 ug/ml c) 94 + or - 21 ng/ml d) 33.8 + or - 5.8 ng/ml	a) 64 yr old: mean steady state with 6x25 mg/day for 108 days b) 64 yr old: mean steady state with 2x75 mg/day for 98 days c) 73 yr old: mean steady state with 75 mg/day for 4 mo d) 62 yr old: mean steady state with 75 mg/day for 9 wk. Elderly males receiving long-term maprotiline therapy. No long-term adverse effects. DRUGS; DRUG THERAPY; AGE; AUSTRALIA; ADULTS; BEHAVIOR DISORDERS; BLOOD PLASMA; CARDIOVASCULAR DISEASES; METABOLISM; ANTIDEPRESSIVE AGENTS	Norman, T.R. Burrows, G.D. Scoggins, B.A. Davis, B. 1979

9,10-Secocholesta-5,6,10(19)-triene-1alpha,3beta,25-triol (8 CI)
9,10-Secocholesta-5,7,10(19)-triene-1,3,25-triol, (1alpha,3beta,5Z,7E)- (9 CI)
32222-06-3
C27-H44-O3
MW 416.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3496 Blood, serum	Injection	Radiometry	a) 4 b) 4	a) 20-35 ng/l b) 0.2-0.5 ng/l	a) 25 ng/l b) 0.35 ng/l	a) Controls, immediately after IV (1 ug) b) Controls, 14 days after IV (1 ug) CALCIUM; PHOSPHORUS; METALS; METABOLITES; BLOOD SERUM; URINE; HYDROXYCHOLECALCIFEROLS; VITAMIN D; UNITED KINGDOM; VITAMINS	Mawer, E.B. Davies, M. Backhouse, J. Hill, L.F. Taylor, C.M. 1976
3497 Urine	Injection Ingestion	Radiometry	a) 4 b) 4 c) 2 d) 2	a) 3.76-10.99% b) 1.63-4.91% c) 9.37-10.57% d) 3.27-4.28%	a) 6.95% b) 3.03% c) 9.97% d) 3.78%	a) Controls, 1 day after IV b) Controls, 2 days after IV c) Controls, 1 day after oral dose d) Controls, 2 days after oral dose Other data available. CALCIUM; PHOSPHORUS; METALS; METABOLITES; BLOOD SERUM; URINE; HYDROXYCHOLECALCIFEROLS; VITAMIN D; UNITED KINGDOM; VITAMINS	Mawer, E.B. Davies, M. Backhouse, J. Hill, L.F. Taylor, C.M. 1976

9,10-Secocholesta-5,7,10(19)-triene-3beta,25-diol (8 CI)
9,10-Secocholesta-5,7,10(19)-triene-3,25-diol, (3beta,5Z,7E)- (9 CI)
19356-17-3
C27-H44-O2
MW 400.65

TISSUE	EXPOSURE ROUTE	ANALYTICAL METHOD	NUMBER OF CASES	RANGE	MEAN	GENERAL INFORMATION	REFERENCE
3498 Blood, plasma	Ingestion	Radiometry	a) 12 b) 10	a) 70-148 ng/ml b) 20-148 ng/ml	a) 109 ng/ml b) 72.8 ng/ml	a) Healthy adults b) Patients with disordered Ca metabolism Values are maximum rises after 10 ug/kg. Peaks at 4-8 hr. 12 healthy adult volunteers and 10 patients with disordered Ca metabolism and/or gastrointestinal function. VITAMIN D; METABOLITES; UNITED KINGDOM; DISEASES; ADULTS; COMPARATIVE EVALUATIONS; BLOOD PLASMA	Stamp, T.C.B. 1974
3499 Blood, serum		RIA	a) 39 b) 149	a) 2.7-39.1 ng/ml b) 7.6-51.4 ng/ml	a) 11.6 ng/ml b) 19.6 ng/ml	a) Patients receiving anticorvulsant therapy b) Controls Seven of 39 had undetectable levels (<8 ng/ml). Adult epileptic patients attending the neurology outpatient clinics of Toronto General and Toronto Western Hospitals. 23 men and 16 women, mean age 45 yr (range 26-72 yr). Hypocalcemia, elevated serum alkaline phosphatase. Decreased bone mass CALCIUM; METABOLISM; CHEMOTHERAPY; PHOSPHORUS; ENZYMES; HYDROXYCHOLECALCIFEROLS; BLOOD SERUM; CENTRAL NERVOUS SYSTEM DISEASES; MINERALS; CANADA	Pylypchuk, G. Creopoulos, D.G. Wilson, D.R. Harrison, J.E. McNeill, K.G. Meema, H.E. Ogilvie, R. Sturtridge, W.C. Murray, T.M. 1978
3500 Blood, serum				a) 3.8-5.1 ng/ml b) Not given c) 10-40 ng/ml	a) 4.5 ng/ml b) 18.1 ng/ml c) 18.5 ng/ml	a) Controls (Vitamin D deficient), range is range of means from beginning to end of study b) 3000 units of vitamin D2 in capsules weekly for 6 mo c) Vitamin-D-fortified flour for 6 mo Asians in Glasgow, 20 adults and 46 children from 14 families. Some subjects had biochemical abnormalities suggestive of rickets or osteomalacia. CALCIUM; METALS; BLOOD SERUM; VITAMIN D; ASIA; UNITED KINGDOM; NUTRITIONAL DEFICIENCIES; DIETS; COMPARATIVE EVALUATIONS; VITAMINS	Pietrek, J. Windo, J. Preece, M.A. O'Riordan, J.L.H. 1976